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Galaxy

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A LIFE IN THE DAY OF AN EDITOR

NINE A. M. The mail. Letter from a fellow stationed at Eglin Air Force Base, Florida. Unfortunately he doesn't sign his name, but he encloses an advertising throwaway from the field, which lists under Lost and Found:

FOUND. Hutch brand, 6 finger baseball glove.

Says this is another clear proof that There Are Aliens Among us. Submitted same to our board of experts; they decide that the evidence is ambiguous. It doesn't prove aliens are here. It only proves that aliens were here; may have departed, leaving their six-fingered baseball gloves behind.

Ten A. M. Two letters from the sponsors of s-f conclaves. One, the Midwescon, to be held June 23rd, 24th and 25th, at the North Plaza Motel, 7911 Reading Road, Cincinnati, Ohio; will we let our readers know about it?

The other from the SeaCon Committee — that is, the Nineteenth World Science-Fiction Convention, to be held in Seattle, Washington, over Labor Day weekend. Their plans are proceeding rapidly. The place will be the Ryatt House (they claim it's America's first air-age hotel, with direct fly-in accommodations);

the Guest of Honor will be Robert A. Heinlein; the place to write for information is Seattle Science-Fiction Club, P. O. Box 1365, Broadway Branch, Seattle 2, Washington. And they too would like us to tell our readers.

Eleven-thirty, and the telephone:

"Sir, I'm Dr. ———, and I have here a patient under light hypnosis who—"

"A what?"

"A patient. I have him under light hypnosis. He is recalling from memory a poem which appeared in the October, 1957, issue of Galaxy, page 56. Will you check it, please? I would like to know if he has it right."

"Um . . . Well . . . Just a minute."

(Search through files.)

"Hello? There's no poem on that page. It's part of a story by Daniel F. Galouye. Come to think of it, Galaxy never ran a poem on any page of any issue."

"Thank you."

(End of telephone call.)

Two o'clock. The afternoon package mail arrives.

Big square package; open it up, and it's a two-volume book by Isaac Asimov. *The Intelligent*

Man's Guide to Science. Looks pretty exciting.

Read a couple of sentences here and there. On the future development of computers:

We represent, for the first time in the history of life on the Earth, a species capable of bringing about its own possible replacement. Of course, we have it in our power to prevent such a regrettable denouement by refusing to build machines that are too intelligent. But it is tempting to build them nevertheless. What achievement could be grander than the creation of an object that surpasses the creator?

On our neighbor worlds in space:

There may be as many as five billion life-bearing planets in our Galaxy and 50 billion billion in the known Universe . . . On at least some of those planets life may very well have evolved to what we would call "intelligent" forms. Even if this has happened in only one inhabited planet out of a million, there would still be 5,000 planets in our Galaxy bearing intelligent life and 50 million billion in the Universe.

Fascinating stuff! Would be good to sit down and start reading the whole thing right now . . . but there's a mass of proof-reading to get through . . . a magazine to edit . . . and what's this other package, anyway?

Turns out to be nothing more nor less than a Galaxy for Galaxy.

No fooling. It's called the "Seelo Galaxy Globe" — transparent vinyl plastic, the size of a beach ball; blow it up (with a bicycle pump; this is no ordinary beach ball; the moisture in the breath harms it) and you have in three dimensions the entire sky as seen from Earth — a desk-sized planetarium for Everyman!

The accompanying literature tells us something about the man who made it. He is also a college teacher — mathematics, this time. A Californian; his name is Theodore Vincent. He spent six months preparing his master stencils, and now can convert two sheets of vinyl plastic into a Galaxy Globe by running them through a silk screen six times — to show the star names, the constellations, the latitude and longitude and various other data in five colors; and to show the stars themselves and the Milky Way in fluorescent white.

Fluorescent? Let's try. We hold the inflated globe up to a ceiling light, locate a dark room — and there it is. The night sky. Big Dipper, Gemini, Orion — Southern Cross, Magellanic Clouds — everything.

A beautiful job!

Five o'clock. Telephone again, from the Production Department: "Where the devil are those proofs?"

But tomorrow will be another day . . .

—THE EDITOR

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Someone out there didn't like trees. He wanted to wreck the

FARMER

By MACK REYNOLDS

I
ONE of the auto-copters swooped in and landed. Johnny McCord emptied his pipe into the wastebasket, came to his feet and strolled toward the open door. He automatically took up a sun helmet

before emerging into the Saharan sun.

He was dressed in khaki shorts and short-sleeved shirt, wool socks and yellow Moroccan babouche slippers.

The slippers were strictly out of uniform and would have been frowned upon by Johnny's im-

Sahara Project — and he was willing to murder in the process!

Illustrated by RITTER

mediate superiors. However, the Arabs had been making footwear suitable for sandy terrain for centuries before there had ever been a Sahara Reforestation Commission. Johnny was in favor of taking advantage of their know-how. Especially since the top brass made a point of staying

in the swank air-conditioned buildings of Colomb-Bechar, Tamanrasset and Timbuktu, from whence they issued lengthy bulletins on the necessity of never allowing a Malian to see a Commission employee in less than the correct dress and in less than commanding dignity. While they

were busily at work composing such directives, field men such as Johnny McCord went about the Commission's real tasks.

It was auto-copter 4, which Johnny hadn't expected for another half hour. He extracted the reports and then peered into the cockpit to check. There were two red lights flickering on the panel. Work for Reuben. This damned sand was a perpetual hazard to equipment. Number 4 had just had an overhaul a few weeks before and here it was throwing red lights already.

He took the reports back into the office and dumped them into the card-punch. While they were being set up, Johnny went over to the office refrigerator and got out a can of Tuborg beer. Theoretically, it was as taboo to drink iced beer in this climate, and particularly at this time of day, as it was to go out into the sun without a hat. But this was one place where the Commission's medics could go blow.

By the time he'd finished the Danish brew, the card-punch had stopped clattering so he took the cards from the hopper and crossed to the sorter. He gave them a quick joggling—cards held up well in this dry climate, though they were a terror further south — and sorted them through four code numbers, enough for this small an amount.

He carried them over to the collator and merged them into the proper file.

He was still running off a report on the Alphabetyper when Derek Mason came in.

Johnny drawled in a horrible caricature of a New England accent, "I say, Si, did the cyclone hurt your barn any?"

Derek's voice took on the same twang. "Don't know, Hiram, we ain't found it yet."

Johnny said, "You get all your chores done, Si?"

Derek dropped the pseudo-twang and his voice expressed disgust. "I got a chore for you, Johnny, that you're going to love. Rounding up some livestock."

Johnny looked up from the report he was running off and shot an impatient glance at him. "Livestock? What the hell are you talking about?"

"Goats."

Johnny McCord flicked the stop button on the Alphabetyper. "Where've you been? There isn't a goat within five hundred miles of here."

Derek went over to the refrigerator for beer. He said over his shoulder, "I was just making a routine patrol over toward Amérene El Kasbach. I'd estimate there were a hundred Tuareg in camp there. Camels, a few sheep, a few horses and donkeys. Mostly goats. Thousands of them. By the

looks of the transplants, they've been there possibly a week or so."

JOHNNY said in agony, "Oh, Lord. What clan were they?"

Derek punched a hole in his beer can with the opener that hung from the refrigerator by a string. "I didn't go low enough to check. You can never tell with a Tuareg. They can't resist as beautiful a target as a helicopter, and one of these days one of them is going to make a hole in me, instead of in the fuselage or rotors."

Johnny McCord, furious, plunked himself down before the telephone and dialed Tessalit, 275 kilometers to the south. The girl on the desk there grinned at him and said, "Hello, Johnny."

Johnny McCord was in no mood for pleasantries. He snapped, "Who's supposed to be on Bedouin patrol down there?"

She blinked at him. "Why, Mohammed is in command of patrolling this area, Mr. McCord."

"Mohammed? Mohammed who? Eighty percent of these Malians are named Mohammed." "Captain Mohammed Mahmoud ould Cheikh." She added, unnecessarily, "The Cadi's son."

Johnny grunted. He'd always suspected that the captain, had got his ideas of what a cadi's son should be like from seeing Hollywood movies. "Look, Kate," he

said. "Let me talk to Mellor, will you?"

Her face faded to be replaced by that of a highly tanned, middle-aged executive type. He scowled at Johnny McCord with a this-better-be-important expression, not helping. Johnny's disposition.

He snapped, "Somebody's let several thousand goats into my eucalyptus transplants in my western four hundred."

Mellor was taken aback.

Johnny said. "I can have Derek back-trail them, if you want to be sure, but it's almost positive they came from the south, this time of year."

Mellor sputtered, "They might have come from the direction of Timmissao. Who are they, anyway?"

"I don't know. Tuareg. I thought we'd supposedly settled with all the Tuareg. Good Lord, man, do you know how many transplants a thousand goats can go through in a week's time?"

"A week's time!" Mellor rasped. "You mean you've taken a whole week to detect them?"

Johnny McCord glared at him. "A whole week! We're lucky they didn't spend the whole season before we found them. How big a staff do you think we have here, Mellor? There's just three of us. Only one can be spared for patrol."

"You have natives," the older man growled.

"They can't fly helicopters. Most of them can't even drive a Land Rover or a jeep. Besides that, they're scared to death of Tuaregs. They wouldn't dare report them. What I want to know is, why didn't you stop them coming through?"

Mellor was on the defensive. He ranked Johnny McCord, but that was beside the point right now. He said finally, "I'll check this all the way through, McCord. Meanwhile, I'll send young Mohammed Mahmoud up with a group of his men."

"To do what?" Johnny demanded.

"To shoot the goats, what else?"

JOHNNY growled, "One of these days a bunch of these Tuareg are going to decide that a lynching bee is in order, and that's going to be the end of this little base at Bidon Cinq."

Mellor said, "If they're Tuareg nomads then they have no legal right to be within several hundred miles of Bidon Cinq. And if they've got goats, they shouldn't have. The Commission has bought up every goat in this part of the world."

Johnny growled, "Sure, bought them up and then left it to the honor of the Tuareg to destroy

them. The honor of the Tuareg! Ha!"

The other said pompously, "Are you criticizing the upper echelons, McCord?"

Johnny McCord snapped, "You're damned right I am." He slammed off the telephone and turned on Derek Mason. "What are you grinning about?"

Derek drawled, "I say, Hiram, I got a sneaky suspicion you ain't never gonna graduate off'n this here farm if you don't learn how to cotton up to the city slickers better."

"Oh, shut up," Johnny growled. "Let's have another beer."

Before Derek could bring it to him, the telephone screen lit up again and Paul Peterson, of the Poste Weygand base, was there. He said, "Hi. You guys look like you're having a crisis."

"Hello, Paul," Johnny McCord said. "Crisis is right. Those jerks down south let a clan of Tuareg, complete with a few thousand goats, camels and sheep through. They've been grazing a week or more in my west four hundred."

"Good grief," Paul grimaced. "At least that's one thing we don't have to worry about. They never get this far up. How'd it happen?"

"I don't know, but I'm going to find out. I haven't seen the mess yet, but it's certain to wreck that whole four hundred. Have

you ever seen just one goat at work on the bark of three-year transplants?"

Paul shuddered sympathetically. "Look, Johnny," he said. "The reason I called you. There's an air-cushion Land Rover coming through. She just left."

Derek Mason looked over Johnny's shoulder into the screen. "What d'ya mean, she?"

Paul grinned. "Just that, and, Buster, she's stacked. A Mademoiselle Hélène Desage of *Paris Match*."

Johnny said, "The French magazine? What's she doing in a road car? Why doesn't she have an aircraft? There hasn't been a road car through here this whole year."

Paul shrugged. "She claims she's getting it from the viewpoint of how things must've been twenty years ago. So, anyway, we've notified you. If she doesn't turn up in eight or ten hours, you better send somebody to look for her."

"Yeah," Johnny McCord said. "Well, so long, Paul."

The other's face faded from the screen and Johnny McCord turned to his colleague. "One more extraneous something to foul up our schedule."

Derek said mildly, "I say, Hiram, what're you complaining about? Didn't you hear tell what Paul jest said? She's stacked. Be

just like a traveling saleswoman visitin' the farm."

"Yeah," Johnny growled. "And I can see just how much work I'll be getting out of you as long as she's here."

II

POSTE Maurice Cortier, better known in the Sahara as Bidon Cinq, is as remote a spot on earth in which man has ever lived. Some 750 kilometers to the south is Bourem on the Niger river. If you go west of Bourem another 363 kilometers, you reach Timbuktu, the nearest thing to a city in that part of the Sudan. If you travel north from Bidon Cinq 1,229 kilometers you reach Colomb-Béchar, the nearest thing to a city in southern Algeria. There are no railroads, no highways. The track through the desert is marked by oil drums filled with gravel so the wind won't blow them away. There is an oil drum every quarter of a mile or so. You go from one to the next, carrying your own fuel and water. If you get lost, the authorities come looking for you in aircraft. Sometimes they find you.

In the latter decades of the Twentieth Century, Bidon Cinq became an outpost of the Sahara Reforestation Commission which was working north from the Niger, and south from Algeria as

well as east from the Atlantic. The water table in the vicinity of Bidon Cinq was considerably higher than had once been thought. Even artesian wells were possible in some localities. More practical still were springs and wells exploited by the new solar-powered pumps that in their tens of thousands were driving back the sands of the world's largest desert.

Johnny McCord and Derek Mason ate in the officer's mess, divorced from the forty or fifty Arabs and Songhai who composed their work force. It wasn't snobbery, simply a matter of being able to eat in leisure and discuss the day's activities free of the chatter of the larger mess hall.

Derek looked down into his plate. "Hiram," he drawled, "who ever invented this here now *cous cous*?"

Johnny looked over at the tall, easy-going Canadian who was his second in command and scowled dourly. He was in no humor for their usual banter. "What's the matter with *cous cous*?" Johnny growled.

"I don't know," Derek said. "I'm a meat and potatoes man at heart."

Johnny shrugged. "*Cous cous* serves the same purpose as potatoes do. Or rice, or spaghetti, or bread, or any of the other bland

basic foods. It's what you put on it that counts."

Derek stared gloomily into his dish. "Well, I wish they'd get something more interesting than ten-year-old mutton to put on this."

Johnny said, "Where in the devil is Pierre? It's nearly dark."

"Reuben?" Derek drawled. "Why Reuben went out to check the crops up in the northeast forty. Took the horse and buggy."

That didn't help Johnny's irritation. "He took an air-cushion jeep, instead of a copter? Why, for heaven's sake?"

"He wanted to check quite a few of the pumps. Said landing and taking off was more trouble than the extra speed helped. He'll be back shortly."

"He's back now," a voice from the door said.

Pierre Marimberty, brushing sand from his clothes, pushed into the room and made his way to the mess-hall refrigerator. He said nothing further until he had a can of beer open.

Johnny said, "Damn it, Pierre, you shouldn't stay out this late in a jeep. If you got stuck out there, we'd have one hell of a time finding you. In a copter you've at least got the radio."

Pierre had washed the dust from his throat. Now he said quietly, "I wanted to check on as many pumps as I could."

"You could have gone back tomorrow. The things are supposed to be self-sufficient, no checking necessary more than once every three months. There's practically nothing that can go wrong with them."

Pierre finished off the can of beer, reached into the refrigerator for another. "Dynamite can go wrong with them," he said.

THE other two looked at him, shocked silent.

Pierre said, "I don't know how many altogether. I found twenty-two of the pumps in the vicinity of In Ziza had been blown to smithereens—out of forty I checked."

Johnny rapped, "How long ago? How many trees . . .?"

Pierre laughed sourly. "I don't know how long ago. The transplants, especially the slash pine, are going to be just so much kindling before I get new pumps in."

Derek said, shocked, "That's our oldest stand."

Pierre Marimberty, a forty-year-old, sun-beaten Algerian colon, eldest man on the team, sank into his place at the table. He poured the balance of his can of beer into a glass.

Johnny said, "What . . . what can we do? How many spare pumps can you get into there, and how soon?"

Pierre looked up at him wearily. "You didn't quite hear what I said, Johnny. I only checked forty. Forty out of nearly a thousand in that vicinity. Twenty-two of them were destroyed, better than fifty percent. For all I know, that percentage applies throughout the whole In Ziza area. If so, there's damn few of your trees going to be left alive. We have a few spare pumps on hand here, but we'd have to get a really large number all the way from Dakar."

Derek said softly, "That took a lot of men and a lot of dynamite. Which means a lot of transport—and a lot of money. We've had trouble before, but usually it was disgruntled nomads, getting revenge for losing their grazing land."

Johnny snorted, "Damn little grazing this far north."

Derek nodded. "I'm simply saying that even if we could blame our minor sabotage on the Tuareg in the past, we can't do it this time. There's money behind anything this big."

Johnny McCord said wearily, "Let's eat. In the morning we'll go out and take a look. I'd better call Timbuktu on this. If nothing else, the Mali Federation can send troops out to protect us."

Derek grunted. "With a standing army of about 25,000 men, they're going to patrol a million

and a half square miles of desert?"

"Can you think of anything else to do?"

"No."

PIERRE Marimbart began dish-
ing *cous cous* into a soup
plate, then poured himself a glass
of *vin ordinaire*. He said, "I can't
think of a better place for saboteurs.
Twenty men could do millions
of dollars of destruction and
never be found."

Johnny growled, "It's not as
bad as all that. They've got to
eat and drink, and so do their
animals. There are damned few
places where they can."

From the door a voice said,
"I am intruding?"

They hadn't heard her car come
up. The three men scrambled to
their feet.

"Good evening," Johnny Mc-
Cord blurted.

"Hell . . . ol!" Derek breathed.

Pierre Marimbart was across
the room, taking her in hand.
"*Bonjour, Mademoiselle. Que
puis-je faire pour vous? Voulez-
vous une biere bien fraiche ou
un apéritif? Il fait très chaud dans
le desert.*" He led her toward the
table.

"Easy, easy there, Reuben,"
Derek grumbled. "The young lady
speaks English. Give a man a
chance."

Johnny was placing a chair for

her. "Paul Peterson, from Poste
Weygand, radioed that you were
coming. You're a little late, Made-
moiselle Desage."

She was perhaps thirty, slim,
long-legged, Parisian style. Even
at Bidon Cinq, half a world away
from the Champs Elysées, she
maintained her chic.

She made a moue at Johnny,
while taking the chair he held.
"I had hoped to surprise you,
catch you off guard." She took in
the sun-dried, dour-faced Ameri-
can wood technologist apprais-
ingly, then turned her eyes in
turn to Derek and Pierre.

"You three are out here all
alone?" she said demurely.

"Desperately," Derek said.

Johnny McCord said, "Made-
moiselle Hélène Desage, I am
John McCord, and these are my
associates, Monsieur Pierre Mar-
imbart and Mr. Derek Mason.
Gentlemen, Mademoiselle Desage
is with *Paris Match*, the French
equivalent of *Life*, so I under-
stand. In short, she is undoubtedly
here for a story. So inxay on the
ump-pays."

"I would love cold beer,"
Hélène Desage said to Pierre, and
to Johnny McCord, "These days
a traveling reporter for *Paris
Match* must be quite a linguist.
My English, Spanish and Italian
are excellent. My German pas-
sable. And while I am not fluent
in Pig-Latin, I can follow it. What

is this you are saying about the
pumps?"

"Oh, Lord," Johnny said. "Per-
haps I'll tell you in the morning.
But for now, would you like to
clean up before supper? You
must be exhausted after that 260
kilometers from Poste Weygand."

Pierre said hurriedly, "I'll take
Mademoiselle Desage over to one
of the guest bungalows."

"Zut!" she said. "The sand! It is
even worse than between Reggan
and Poste Weygand. Do you
realize that until I began coming
across your new forests I saw no
life at all between these two
posts?"

The three forestry experts
bowed in unison, as though re-
hearsed. "Mademoiselle," Derek,
from the heart, "calling our trans-
plant forests is the kindest thing
you could have said in these
parts."

They all laughed and Pierre
led her from the room.

Derek looked at Johnny Mc-
Cord. "Wow, that was a slip
mentioning the pumps."

Johnny was looking through
the door after her. "I suppose
so," he said sourly. "I'll have to
radio the brass and find out the
line we're supposed to take with
her. That's the biggest magazine
in the French-speaking world and
you don't get a job on it with-
out knowing the journalistic
ropes. That girl can probably

smell a story as far as a Tuareg
can smell water."

"Well, then undoubtedly she's
already sniffing. Because, between
that clan of Tuareg with its flocks
and the pump saboteurs, we've
got more stories around here than
I ever expected!"

III

IN the morning Hélène Desage
managed to look the last word
in what desert fashion should be,
when she strolled into Johnny
McCord's office. Although she
came complete with a sun hel-
met that must have been the
product of a top Parisian shop,
she would have been more at
place on the beaches at Miami,
Honolulu or Cannes. Her shorts
were short and fitting, her blouse
silken, her walking shoes dainty.

He considered for a moment
and then decided against inform-
ing her that Moslems, particularly
in this part of the world, were
little used to seeing semi-nude
women strolling about. He'd
leave the job of explanation to
Pierre, as a fellow Frenchman and
the oldest man present to boot.

"*Bonjour*," she said. "What a
lovely day. I have been strolling
about your little oasis. But you
have made it a garden!"

"Thanks," Johnny said. "We've
got to have something to do after
working hours. Entertainment is

on the scarce side. But it's more than a garden. We've been experimenting to see just what trees will take to this country — given water and care through the early years. Besides, we use it as a showplace."

"Showplace?"

"For skeptical politicians who come through," Johnny said, seating her in a chair near his desk. "We give them the idea that the whole Sahara could eventually be like this square mile or so at Bidon Cinq. Palm trees, fruit trees, pines, shade trees. The works."

"And could it?"

Johnny grinned sourly. "Well, not exactly. Not all in one spot, at least. You've got to remember, the Sahara covers an area of some three and a half million square miles. In that area you find almost everything."

"Everything except water, eh?"

She was tapping a cigarette on a polish-reddened thumbnail. As he lit it for her, Johnny McCord realized that he hadn't seen fingernail polish for a year. He decided it was too long.

"Even water, in some parts," he said. "There's more water than most people realize. For instance, the Niger, which runs right through a considerable part of the Sahara, is the eleventh largest river in the world. But until our commission went to work on it,

it dumped itself into the Gulf of Guinea, unused."

"The Niger is a long way from here," she said through her smoke.

He nodded. "For that matter, though, we have a certain amount of rain, particularly in the highland regions of the central massif. In the past, with no watershed at all, it ran off, buried itself in the sands, or evaporated."

"Mr. McCord," she said, "you are amazingly optimistic. Formerly, I must admit I had little knowledge of the Sahara Re-forestation Commission. And I deliberately avoided studying up on the subject after receiving this assignment, because I wanted first impression to be received on the spot. However, I've just driven across the Sahara. My impression is that your Commission is one great—*Comment dit-on?*—boondoggling project, a super-W.P.A. into which to plow your American resources and manpower. It is a fake, a delusion. This part of the world has never been anything but wasteland, and never will be."

Johnny McCord heard her out without change in expression.

He'd been through this before. In fact, almost every time a junketing congressman came through. There was danger in the viewpoint, of course. If the fantastic sums of money which were being spent were cut off, such

pessimistic views would become automatically correct.

He took the paperweight from a stack of the correspondence on his desk and handed it to her.

She looked at it and scowled —very prettily, but still a scowl. "What is this? It's a beautiful piece of stone."

"I picked it up myself," Johnny said. "Near Reggan. It's a chunk of petrified wood, Miss Desage. From a tree that must have originally had a diameter of some ten feet. Not quite a redwood, of course, but big."

"Yes," she said, turning it over in her hand. "I can see this part, which must have once been bark. But why do you show it to me?"

"The Sahara was once a semi-tropical, moist area, highly wooded. It can become so again."

SHE put the piece of fossil back on his desk. "How long ago?" she said bluntly.

"A very long time ago, admittedly. During the last Ice Age and immediately afterwards. But, given man's direction, it can be done again. And it must be."

She raised pencilled eyebrows at him. "Must be?"

Johnny McCord shifted in his chair. "You must be aware of the world's population explosion, Miss Desage. The human race can't allow three and a half million square miles of land to be value-

less." He grunted in deprecation. "And at the rate it was going, it would have been four million before long."

She didn't understand.

Johnny spelled it out for her. "A desert can be man-made. Have you ever been in the Middle East?" At her nod, he went on. "Visitors there usually wonder how in the world the ancient Jews could ever have thought of that area as a land of milk and honey. On the face of it, it's nothing but badlands. What was once the Fertile Crescent now looks like Arizona."

Hélène Desage was frowning at him. "And you suggest man did this—not nature?"

"The goat did it. The goat, and the use of charcoal as fuel. Along with ignorance of soil erosion and the destruction of the wonderful watershed based on the Cedars of Lebanon. Same thing applies to large areas of Libya and Tunisia, and to Morocco and Spain. Those countries used to be some of the richest agricultural areas of the Roman Empire. But you can't graze goats, probably the most destructive animal domesticated, and you can't depend on charcoal for fuel, unless you want to create desert."

"Those things happened a long time ago."

Johnny snorted. "When we first began operations, the Sahara was

going south at the rate of two miles a year. Goats prefer twigs and bark even to grass. They strip a country."

"Well," the reporter said, shrugging shapely shoulders, "at any rate, the task is one of such magnitude as to be fantastic. Yesterday, I drove for nearly eight hours without seeing even a clump of cactus."

"The route you traveled is comparatively untouched by our efforts, thus far," Johnny nodded agreeably. "However, we're slowly coming down from Algeria, up from the Niger, and, using the new chemical methods of freshening sea water, east from Mauritania."

He came to his feet and pointed out spots on the large wall map. "Our territory, of course, is only this area which once was called French West Africa, plus Algeria. The battle is being fought elsewhere by others. The Egyptians and Sudanese are doing a fairly good job in their country, with Soviet Complex help. The Tunisians are doing a wonderful job with the assistance of Common Europe, especially Italy."

She stood beside him and tried to understand. "What is this area, here, shaded green?"

He said proudly, "That's how far we've got so far, heading north from the Niger. In the past,

the desert actually came down to the side of the river in many places. The water was completely wasted. Now we've diverted it and are reforesting anywhere up to three miles a year."

"Three miles a year," she scoffed. "You'll take five centuries."

HE shook his head and grinned. "It's a progressive thing. Water is admittedly the big problem. But as our forests grow, they themselves bring up the moisture content of the climate. Down in this area—" he made a sweeping gesture over the map which took in large sections north of the Niger—"we've put in hundreds of millions of slash pine, which is particularly good for sandy soil and fast growing. In ten years you've gone from two-year-old seedlings to a respectable forest."

Johnny pointed out Bidon Cinq on the map. "At the same time we found what amounts to a subterranean sea in this area. Not a real sea, of course, but a water-bearing formation or aquifer, deep down under the surface of the earth—layers of rock and gravel in which large quantities of water are lying. The hydro-geological technicians who surveyed it estimate that it holds reserves of several billion tons of water. Utilizing it, we've put in

several hundred square miles of seedlings and transplants of various varieties. Where there are natural oases, of course, we stress a lot of date palm. In rocky areas it's *acacia tortila*. In the mountains we sometimes use varieties of the pinyon—they'll take quite a beating but are a little on the slow-growing side."

She was looking at him from the sides of her eyes. "You're all taken up by this, aren't you Mr. McCord?"

Johnny said, surprise in his voice. "Why, it's my work."

Derek came sauntering in and scaled his sun helmet onto his own desk. "Good morning, Mademoiselle," he said. And to Johnny, "Hiram, that city slicker from Timbuktu just came up with his posse."

Hélène said, "What is this Si, Hiram and Reuben which you call each other?"

Johnny smiled sourly, "In a way, Miss Desage, this is just one great tree farm. And all of us are farmers. So we make jokes about it." He thought for a moment. "Derek, possibly you better take over with Mohammed. I want to get over to In Ziza with Reuben."

"To see about the pumps?" Hélène said innocently.

Johnny frowned but was saved from an answer by the entrance of Mohammed Mohmoud. He was dark as a Saharan becomes

dark, his original Berber blood to be seen only in his facial characteristics. He wore the rather flamboyant Mali Federation desert uniform with an air.

When he saw the girl, his eyebrows rose and he made the Moslem salaam with a sweeping flourish.

Johnny said, "Mademoiselle Desage, may I present Captain Mohammed Mohmoud ould Cheikh, of the Mali desert patrol." He added sourly, "The officer in charge of preventing nomads from filtering up from the south into our infant forests."

The Moslem scowled at him. "They could have come from the east, from Timissao," he said in quite passable English. "Or even from Mauritania." He turned his eyes to Hélène Desage. "*Enchanté, Mademoiselle. Très heureux de faire ta connaissance.*"

She gave him the full benefit of her eyes. "*Moi aussi, Monsieur.*"

Johnny wasn't through with the Malian officer. "There's a hundred of them," he snapped, "with several thousand head of goats and other livestock. It would have been impossible to push that number across from Mauritania or even from the east, and you know it."

A lighter complexion would have shown a flush. Mohammed Mohmoud's displeasure was lim-

ited in expression to a flashing of desert eyes. He said, "Wherever their origin, the task would seem to be immediately to destroy the animals. That is why my men and I are here."

Pierre Marimbart had entered while the conversation was going on. He said, "Johnny, weren't you going over to In Ziza with me?"

Hélène Desage said, the tip of her right forefinger to her chin as she portrayed thought, "I can't decide where to go. To this crisis of the Tuareg, or to the crisis of the pumps—whatever that is."

Johnny said flatly, "Sorry, but you'd just be in the way at either place."

Mohammed Mohmoud was shrugging. "Why not let her come with me? I can guarantee her protection. I have brought fifty men with me, more than a match for a few bedouin."

"Gracious," she said. "Evidently I was unaware of the magnitude of this matter. I absolutely *must* go."

Johnny said, "No."

She looked at him appraisingly. "Mr. McCord," she said, "I am here for a story. Has it occurred to you that preventing a *Paris Match* reporter from seeing your methods of operation is probably a bigger story than anything else I could find here?" She struck a mock post. "I can see the headlines. *Sahara Reforestation Au-*

thorities Prevent Journalists from Observing Operations."

"Oh, Good Lord," Johnny growled. "This should happen to me, yet! Go on with Derek and the captain, if you wish."

PIERRE Marimbart and Johnny McCord took one of the faster helicopters, Pierre piloting. With French élan he immediately raised the craft a few feet and then like a nervous horse it backed up, wheeled about and dashed forward in full flight.

Spread below them were the several dozen buildings which comprised Bidon Cinq; surrounding the buildings, the acres of palm and pine, eucalyptus and black locust. Quick-growing, dry-climate trees predominated, but there were even such as balsam fir, chestnut and elm. It made an attractive sight from the air.

The reforestation projects based on Bidon Cinq were not all in the immediate vicinity of the home oasis. By air, In Ziza was almost 125 kilometers to the northeast. By far the greater part of the land lying in between was still lacking in vegetation of any sort. The hydro-geological engineers who had originally surveyed the area for water had selected only the best sections for immediate sinking of wells, placement of solar power pumps, and eventually the importation of

two-year seedlings and three- and four-year-old transplants. The heavy auto-planters, brought in by air transport, had ground their way across the desert sands in their hundreds, six feet between machines. Stop, dig the hole, set the seedling, splash in water, artfully tamp down the soil, move on another six feet, stop—and begin the operation all over again. Fifty trees an hour, per machine.

In less than two months, the planters had moved on to a new base further north. The mob of scientists, engineers, water and forest technicians, mechanics and laborers melted away, leaving Johnny McCord, his two assistants, his half dozen punch-card machines, his automated equipment and his forty or fifty native workers. It was one of a hundred such centers. It would eventually be one of thousands. The Sahara covered an area almost the size of Europe.

Johnny McCord growled, "Friend Mohammed seems quite taken with our reporter."

Pierre grinned and tried to imitate a New England twang. "Why not, Hiram? She's the first, eh, women folks seen in these parts for many a day." He looked down at the endless stretches of sand dunes, gravel and rock outcroppings. "Mighty dry farm land you've got around here, Hiram."

Johnny McCord grunted.

"Derek said the other day it's so dry even the mirages are only mud holes." He pointed with his forefinger. "There's the first of our trees. Now, what pumps did you check?"

Pierre directed the copter lower, skimmed not much higher than the young tree tops. Some of them had already reached an impressive height. But Johnny McCord realized that the time was not too distant when they'd have to replant. Casualties were considerably higher than in forest planting at home. Considerably so. And replanting wasn't nearly so highly automated as the original work. More manpower was required.

"These pumps here seem all right," he said to Pierre.

"A little further north," Pierre said. "I came in over the track there, from the road that comes off the main route to Poste Weygand. Yes, there we are. Look! Completely destroyed."

Johnny swore. The trees that had depended on that particular pump wouldn't last a month, in spite of the fact that they were among the first set in this area.

He said, "Go higher. We should be able to spot the complete damage with glasses. You saw twenty-two, you say?"

"Yes, I don't know how many more there might be."

There were twenty-five de-

stroyed pumps in all. And all of them were practically together.

It was sheer luck that Pierre Marimbert had located them so soon. Had his routine check taken place in some other section of the vast tree development, he would have found nothing untoward.

"This isn't nearly so bad as I had expected," Johnny growled. He was scowling thoughtfully.

"What's the matter?" Pierre said.

"I just don't get it," Johnny said. "Number one, nomads don't carry dynamite, unless it's been deliberately given them. Two, if it was given them by someone with a purpose, why only enough to blow twenty-five pumps? That isn't a drop in the bucket. A few thousand trees are all we'll lose. Three, where did they come from? Where are their tracks? And where have they gone? This job wasn't done so very long ago, probably within a week or two at most."

"How do you know that?"

"Otherwise those trees affected would already be dying. At their age, they couldn't stand the sun long without water."

Pierre said, his face registering disbelief, "Do you think it could be simple vandalism on the part of a small band of Tuareg?"

"Sure, if the pumps had been destroyed by hand. But with ex-

plosives? Even if your band of Tuareg did have explosives they wouldn't waste them on a few Sahara Reforestation Commission pumps."

"This whole thing just doesn't make sense," Pierre Marimbert decided.

"Let's land and take a look at one of those pumps," Johnny said. "You know, if you get the whole crew to work on this you might be able to replace them before we lose any of these transplants. It's all according to how long ago they were destroyed."

IV

BACK at Bidon Cinq again that afternoon, Johnny McCord was greeted by the native office assistant he'd left in charge while all three of the officers were gone. Mellor, at the Tissalit base, had made several attempts to get in touch with him.

"Mellor!" Pierre grunted. "How do you Americans say it? Stuffed shirt!"

"Yeah," Johnny McCord said, sitting down to the telephone. "But my boss."

While Pierre was fishing two cans of beer from the refrigerator, Johnny dialed Tissalit. Kate's face lit up the screen. Johnny said, "Hi. I understand the old man wants to talk to me."

"That's right," the girl said,



and moved a switch. "Just a minute, Johnny."

Her face faded to be replaced by that of Mellor. Johnny noted that as usual the other wore a business suit, complete with white shirt and tie—in the middle of the Sahara!

Mellor was scowling. "Where've you been, McCord?"

"Checking some pumps near In Ziza," Johnny said evenly.

"Leaving no one at all at camp?" the other said.

Johnny said, "There were at least a score of men here, Mr. Mellor."

"No officers. Suppose an emergency came up?"

Johnny felt like saying, *An emergency did come up, two of them in fact. That's why we were all gone at once.* But for some reason he decided against explaining current happenings at Bidon Cinq until he had a clearer picture. He said, "There are only three of us here, Mr. Mellor. We have to stretch our manpower. Derek Mason had to go over to Amérene el Kasbach with Mohammed Mahmoud and his men to clear out those nomads and their livestock."

"What did they find? Where were the Tuareg from?"

"They haven't returned yet." Automatically, Johnny took up his can of beer and took a swallow from it.

Mellor's eyebrows went up. "Drinking this early in the day, McCord?"

Johnny sighed deeply, "Look, Mr. Mellor, Pierre Marimbent and I just returned from several hours in the desert, inspecting pumps. We're dehydrated, so we're drinking cold beer. It tastes wonderful. I doubt if it will lead either of us to a drunkard's grave."

Mellor scowled pompously. He said finally, "See here, McCord—the reason I called—you can be expecting a reporter from one of the French publications—"

"She's here."

"Oh," Mellor said. "I just received notice this morning. Orders are to give her the utmost cooperation. Things are on the touchy side right now. Very touchy."

"How do you mean?" Johnny said.

"There are pressures on the highest levels," Mellor said, managing to put over the impression that these matters were above and beyond such as Johnny McCord but that he, Mellor, was privy to them.

"What pressures?" Johnny said wearily. "If you want me to handle this woman with kid gloves, then I've got to know what I'm protecting her against, or hiding from her, or whatever the hell I'm supposed to do."

Mellor glared at him. "I'm not sure I always appreciate your flippancy, McCord," he said. "However, back home the opposition is in an uproar over our expenditures. Things are very delicate. A handful of votes could sway the continuance of the whole project."

Johnny McCord closed his eyes in pain. This came up every year or so.

Mellor said, "That isn't all. The Russkies are putting up a howl in the Reunited Nations. They claim the West plans to eventually take over all northwest Africa. That this reforestation is just preliminary to make the area worth assimilating."

Johnny chuckled sourly, "Let's face it. They're right."

Mellor was shocked. "Mr. McCord! The West has never admitted to any such scheme."

Johnny sighed. "However, we aren't plowing billions into the Sahara out of kindness of heart. The Mali Federation alone has almost two million square miles in it, and less than twenty million population. Already, there's fewer people than are needed to exploit the new lands we've opened up."

"Well, that brings up another point," Mellor said. "The Southeast Asia Bloc is putting up a howl too. They claim they should be the ones allowed to reclaim this area and that it should go

into farmland instead of forest."

"They're putting the cart before the horse," Johnny said. "At this stage of the game, the only land they could use really profitably for farming would be along the Niger. We're going to have to forest this whole area first, and in doing so, change the whole climate. Then it'll . . ."

Mellor interrupted him. "I'm as familiar with the program of the Sahara Reforestation Commission as you are, I am sure, McCord. I need no lecture. See that Miss Desage gets as sympathetic a picture of our work as possible. And, for heaven's sake, don't let anything happen that might influence her toward writing something that would change opinions either at home or in the Reunited Nations."

"I'll do my best," Johnny said sourly.

The other clicked off.

PIERRE was handy with another can of beer, ready opened. "So Mademoiselle Desage is to be handled with loving care."

Johnny groaned, "And from what we've seen so far of Mademoiselle Desage, she's going to take quite a bit of loving care to handle."

Outside, they could hear the beating of rotors coming in. Two helicopters, from the sound of it. Beer cans in hand they went over

to the window and watched them approach.

"Derek and the girl in one, Mohammed in the other," Pierre said. "Evidently our good captain left the messy work of butchering goats to his men, while he remains on the scene to be as available to our girl H  l  ne as she will allow."

The copters swooped in, landed, the rotors came to a halt and the occupants stepped from the cockpits. The Arab ground crew came running up to take over.

Preceded by H  l  ne Desage, the two men made their way toward the main office. Even at this distance there seemed to be an aggressive lift to the girl's walk.

"Oh, oh, my friend," Pierre said. "I am afraid Mademoiselle Desage is unhappy about something."

Johnny groaned. "I think you're right. But smile, Reuben, smile. You heard the city slicker's orders. Handle her with all the care of a new-born heifer."

H  l  ne Desage stormed through the door and glared at Johnny McCord. "Do you realize what your men are doing?"

"I thought I did," Johnny said placatingly.

Derek and Mohammed Mohmoud entered behind her. Derek winked at Johnny McCord and

made a beeline for the refrigerator. "Beer, everybody?" he said.

Mohammed Mohmoud said, "A soft drink for me, if you please, Mr. Mason."

Derek said, "Sorry, I forgot. Beer, Miss Desage?"

She turned and glared at him. "You did nothing whatsoever to prevent them!"

Derek shrugged. "That's why we went out there, honey. Did you notice how much damage those goats had done to the trees? Thousands of dollars worth."

Johnny said wearily, "What happened?" He sank into the chair behind his desk.

The reporter turned to him again. "Your men are shooting the livestock of those poverty-stricken people."

Mohammed Mohmoud said, "We are keeping an accurate count of every beast destroyed, Mr. McCord." His dark face was expressionless.

Johnny McCord attempted to explain to the girl. "As I told you, Miss Desage, goats are the curse of the desert. They prefer leaves, twigs and even the bark of young trees to grass. The Commission before ever taking on this tremendous project arranged through the Mali Federation government to buy up and have destroyed every grazing animal north of the Niger. It cost millions upon millions. But our work

couldn't even begin until it was accomplished."

"But why slaughter the livelihood of those poor people? You could quite easily insist that they return with their flocks to whatever areas are still available to them."

Derek offered her a can of beer. She seemed to be going to reject it, but a desert-born thirst changed her mind. She took it without thanking him.

The lanky Canadian said mildly, "I tried to explain to her that the Tuareg aren't exactly innocent children of the desert. They're known as the Apaches of the Sahara. For a couple of thousand years they've terrified the other nomads. They were slave raiders, bandits. When the Commission started its work the other tribes were glad to sell their animals and take up jobs in the new oases. Send their kids to the new schools we've been building in the towns. Begin fitting into the reality of modern life."

Her eyes were flashing now. "The Apaches of the Sahara, eh? *Bien sur!* If I remember correctly, the American Apaches were the last of the Indian tribes which you Americans destroyed. The last to resist. Now you export your methods to Africa!"

Johnny McCord said mildly, "Miss Desage, it seems to be

the thing these days to bleed over the fate of the redman. Actually, there are a greater number of them in the United States today than there were when Columbus landed. But even if you do carry a torch for the noble Indian, picking the Apaches as an example is poor choice. They were bandit tribes, largely living off what they could steal and raid from the Pueblo and other harder working but less warlike Indians. The Tuareg are the North African equivalent."

"Who are you to judge?" she snapped back. "Those tribesmen out there are the last defenders of their ancient desert culture. Their flocks are their way of life. You mercilessly butcher them, rob their women and children of their sole source of food and clothing."

JOHNNY McCord ran his hand over his face in an unhappy gesture. "Look," he said plaintively. "Those goats and sheep have already been bought and paid for by the Commission. The Tuareg should have destroyed them, or sold them as food to be immediately butchered, several years ago. Where they've been hiding is a mystery. But they simply have no right to be in possession of those animals, no right to be in this part of the country, and, above all, no right

to be grazing in our transplants." "It's their country! What right have you to order them away?"

Johnny McCord held up his hands, palms upward. "This country is part of the Mali Federation, Miss Desage. It used to be called French Sudan and South Algeria. The government of the Federation gladly accepted the project of reforesting the Sahara. Why not? We've already succeeded in making one of the most poverty-stricken areas in the world a prosperous one. Far from there being unemployment here, we have a labor shortage. Schools have opened, even universities. Hospitals have sprung up. Highways have been laid out through country that hadn't even trails before. The Federation is booming. If there are a few Tuareg who can't adapt to the new world, it's too bad. Their children will be glad for the change."

She seated herself stiffly. "I am not impressed by your excuses," she said.

Johnny shrugged and turned to Mohammed Mohmoud who had been standing silently through all this, almost as though at attention.

Johnny said, "Did you learn where this band comes from? Where they had kept that many animals for so long without detection?"

The Moslem officer shook his

head. "They wouldn't reveal that."

Johnny looked at Derek Mason. The Canadian shook his head. "None of them spoke French, Johnny. Or if they did, they wouldn't admit it. When we first came up they looked as though they were going to fight. Happily, the size of the captain's command made them decide otherwise. At any rate, they're putting up no resistance. I let them know through the captain, here, that when they got back to Tissalit, or Timbuktu, they could put in a demand for reimbursement for their animals—if the animals were legally theirs."

Johnny looked at the Malian officer again. "How come you've returned to camp? Shouldn't you be out there with your men?"

"There were a few things to be discussed," the Moslem said. He looked significantly at the French reporter.

Hélène Desage said, "Let me warn you, I will not tolerate being sent away. I want to hear this. If I don't, I demand you let me communicate immediately with my magazine and with the Transatlantic Newspaper Alliance for whom I am also doing a series of articles on the Sahara Reforestation scheme."

Johnny McCord winced. He said, "There is nothing going on around here, Miss Desage, that is

secret. You won't be ordered away." He turned to Mohammed Mohmoud. "What did you wish to discuss, Captain?"

"First, what about the camels, asses and horses?"

"Shoot them. Practically the only graze between here and Tissalit are our trees."

"And how will they get themselves and their property out of this country?" the reporter snapped.

Johnny said wearily, "We'll truck them out, Miss Desage. They and all their property. And while we're doing it, we'll feed them. I imagine, before it's all over it will cost the Commission several thousand dollars." He turned back to the desert patrol captain. "What else?"

From a tunic pocket Mohammed Mohmoud brought a handgun and handed it to Johnny McCord. "I thought you might like to see this. They were quite well armed. At first I thought there might be resistance."

Johnny turned the automatic over in his hands, scowling at it. "What's there to see that's special? I don't know much about guns."

Mohammed Mohmoud said, "It was made in Pilsen."

Johnny looked up at him. "Czechoslovakia, eh?"

The other said, "So were most of their rifles."

Hélène Desage snorted in depreciation. "So, we'll drag in that old wheeze. The red menace. Blame it on *la Russie*."

Johnny McCord said mildly, "We haven't blamed anything on the Russkies, Miss Desage. The Tuareg have a right to bear arms, there are still dangerous animals in the Mali Federation. And they are free to purchase Czech weapons if they find them better or cheaper than western ones. Don't find an exciting story where there is none. Things are tranquil here."

Hélène Desage stared at him. So did Mohammed Mohmoud and Derek Mason for that matter.

Only Pierre Marimbert realized Johnny McCord's position, and he chuckled and went for more beer.

V

JOHNNY McCord was a man who didn't like to be thrown out of routine. He resented the interference with his schedule of the past few days. By nature he was methodical, not given to inspiration.

All of which was probably the reason that he spent a sleepless night trying to find rhyme and reason where seemingly there was none.

At dawn, he stepped from the door of his Quonset hut quarters and looked for a moment into the

gigantic red ball which was the Saharan sun. Neither dawn nor sunset at Bidon Cinq were spectacular, nor would they become so until the Sahara Reforestation Commission began to return moisture to desert skies. Johnny wondered if he would live to see it.

He made his way over to the huge steel shed which doubled as garage and aircraft hanger. As yet, none of the native mechanics were stirring, although he could hear sounds of activity in the community kitchen.

Derek Mason looked up from his inspection of Hélène Desage's air-cushion Land Rover.

Johnny McCord scowled at him. "What in the hell are you doing here?"

The lanky Canadian came erect and looked for a long moment at his superior. He said finally, soberly, "It occurs to me that I'm probably doing the same thing you came to do."

"What have you found?"

"That a small bomb has been attached to the starter."

Johnny didn't change expression. It fitted in. "What else?" he said.

Derek handed him a steel ring.

Johnny McCord looked at it, recognized it for what it was and stuck it in his pocket. "Let's go back to the office. Yell in to the cook to send some coffee over,

and call Pierre. We've got some notes to check."

Mademoiselle Desage was a late riser. When she entered the office, the three Sahara Reforestation Commission officers were already at work.

She said snappishly to Johnny McCord, "Today I would like to see these destroyed pumps."

Johnny said, his eyebrows questioning, "How did you know they were destroyed?"

"It doesn't seem to be much of a secret. The story is all about the camp."

"Oh?" Johnny sighed, then drawled to Derek, "I say, Si, you better go get the hired hand, we might as well finish this up so we can get back to work."

Derek nodded and left.

Johnny McCord left the collar he'd been working with, went around behind his desk and sat down. "Take a chair, Miss Desage. I want to say a few things in the way of background to you."

She sat, but said defiantly, "I have no need of a lengthy lecture on the glories of the Sahara Reforestation Commission."

"Coffee?" Pierre Marimbart said politely.

"No, thank you."

Johnny said, his voice thoughtful, "I imagine the real starting point was back about 1957 when the Chinese discovered that a

nation's greatest natural resource is its manpower."

SHE frowned at him. "What in the world are you talking about?"

He ignored her and went on. "Originally, appalled by the job of feeding over half a billion mouths, they had initiated a birth control plan. But after a year or two they saw it was the wrong approach. They were going to succeed, if they succeeded, in their *Great Leaps Forward* by utilizing the labor of every man, woman and child in the country. And that's what they proceeded to do. The lesson was brought home to the rest of the world in less than ten years, when such other countries as India and Indonesia failed to do the same."

Johnny leaned back in his chair, and his eyes leaned thoughtful but unseeing. "Even we of the west learned the lesson. The most important factor in our leadership was our wonderful trained labor force. As far back as 1960 we had more than 65 million Americans working daily in industry and distribution. Even the Russkies, with their larger population, didn't begin to equal that number."

"What are you driveling about?" the reporter demanded.

"To sum it up," Johnny said mildly, "the battle for men's

minds continues and each of the world's great powers has discovered that it can't afford to limit its population—its greatest resource. So population continues to explode and the world is currently frantically seeking sources of food for its new billions. The Amazon basin is being made into a tropical garden; the Japanese, landless, are devising a hundred methods of farming the sea; Australia is debouching into its long unpopulated interior, doing much the same things we are here in the Sahara. The Chinese are overflowing into Sinkiang, Mongolia and Tibet; the Russkies into Siberia. We of the west, with the large underdeveloped areas of the western hemisphere have not been so greatly pushed as some others. However, there is always tomorrow."

Derek entered with Captain Mohammed Mohmoud. The latter day Rudolph Valentino had a puzzled expression on his dark face.

"Here's the hired man, Hiram," Derek drawled.

The desert patrol officer nodded questioningly to the men and said, "*Bonjour*," to Hélène Desage.

Johnny went on. "Yes, there's tomorrow. And by the time we run out of *Lebensraum* in Brazil and Alaska, in Central America and the Argentine, in Texas and

Saskatchewan, we're going to need the three million square miles of the Sahara."

She said in ridicule, "It will take you a century at least to reforest the desert."

"At least." Johnny nodded agreeably. "And we're willing and able to look that far ahead. Possibly by that time our opponents will also be looking for new lands for their expanding peoples. And where will they find them? The advantage will be ours, Miss Desage."

Mohammed Mohmoud looked from one to the other, frowning. "What are we discussing?" he said. "I should be getting back to my men."

Derek yawned and said, "Forget about it, pal. You're never going to be getting back to your men again."

THE desert patrol officer's eyes widened. He turned his glare on Johnny McCord, "What is all this?"

Johnny said, "I'll tell it, Derek."

Hélène Desage was as surprised as the Malian. "What is going on? Are you trying to whitewash yourselves by casting blame on this gentleman?"

"Let me go on," Johnny said. "Needless to say, there are conflicting interests. The Soviet Complex obviously would as soon

we didn't succeed. However, wars are impractical today, and the Russkies and Chinese are taken up with their own development. The Southeast Asia bloc wouldn't mind taking over here themselves, they desperately need land already. But they aren't our biggest opponents. There's another group even more involved—the *colons* of Algeria and Morocco and those of even such Mali cities as Dakar. I suppose it is this last element that you represent, Miss Desage."

She was staring unbelievably at him now.

"Their interest is to get the Sahara Reforestation Commission out of the way so that they can immediately exploit the area. They are interested in the *now*, not the potentialities of the future. They resent the use of the Niger for reforestation, when they could use it for immediate irrigation projects. They would devote the full resources of the Mali Federation and Algeria to seeking oil and minerals and in the various other ways the country might be exploited. Finally, they rather hate to see the western schools, hospitals, and other means used to raise the local living standards. They liked the low wage rates that formerly applied."

Johnny nodded. "Yes, I imagine that's your angle."

Hélène Desage stormed to her feet. "I don't have to listen to this!"

Derek said, "Honey, we sure aren't holding you. You're free to go any time you want. And you can take this pal of yours along with you." He jerked his head contemptuously at Mohammed Mohmoud.

Pierre Marimbirt said, "Mademoiselle, we have no idea of where you two met originally, nor how close your relationship, but the captain should have remembered that I too am French. A gentleman, on first meeting a lady, would never, never address her as *tu* in our language."

Johnny sighed again and looked at his watch. "Other things pile up too, Miss Desage. You let slip a few moments ago that you knew about the pumps being destroyed. You said the rumor was all around camp. But it couldn't be. The only persons who knew about it were myself, Pierre and Derek. On top of that, there were no signs of bedouin or animals near the exploded pumps; the person who did the job must have come in an aircraft or air-cushion car. And, besides, we found the pin of a hand grenade in your land rover this morning. We had thought at first that dynamite had been used, but evidently you smuggled your much more compact bombs

across the desert with you. Obviously, no one would have dreamed of searching your vehicle.

"No, Miss Desage, it's obvious that you detoured from the track on the way down from Poste Weygand, went over to In Ziza, a comparatively short distance, and blew up twenty-five of our pumps."

Johnny turned to the Malian officer now. "At the same time you were coordinating with her, you and whatever gang is hiring you. Someone supplied those Tuareg with the livestock and paid them to trek up here. You, of course, turned your back and let them through. The same someone who supplied the livestock also supplied Czech weapons."

Hélène Desage was still sputtering indignation. "Ridiculous! Why? What would motivate me to such nonsense?"

Johnny grimaced. "The whole thing makes a beautiful story at a time when the American government is debating the practicality of the whole project. You could do quite a sob story on the poor, poverty-stricken Tuareg having their livestock destroyed. Then, quite a tale about the bedouin raiding our pumping stations and blowing them up. And quite a tale about the Tuareg being armed with Czech weapons. Oh, I imagine before it was through

you'd have drawn a picture of civil war going on here between the nomads and the Commission. Blowing up your own car with a small bomb attached to the starter was just one more item. By the way, were you going to do it yourself? Or did you intend to allow one of our mechanics to kill himself?"

She flushed. "Don't be ridiculous. No one would have been hurt. The bomb is a very small one. More smoke and flash than anything else."

"Well, thanks for small favors," Derek said sarcastically.

SHE gave up. "Very well," she snapped. "There is nothing you can do. This whole project, as I said before, is nothing but American boondoggling, a way of plowing endless resources into a hole. Your real motivation is an attempt to prevent depression and unemployment in your country."

Pierre Marimbert said softly, "So you admit to this whole scheme to discredit us?"

"Why not?" She turned to the door. "I will still write my articles. It's my word or yours."

Derek grinned at her. "I think I could fall in love with you, honey," he said. "Life would provide few dull moments. However, you didn't notice how nice and automated this office is. Card

machines, electric typewriters, all the latest—including tape recorders for office conversations. You talked too much, honey."

"*Cochon!*" she shrieked at him. She whirled and was through the door.

Johnny turned to Mohammed Mohmoud. "I guess the best thing for you would be to turn in your commission, Captain."

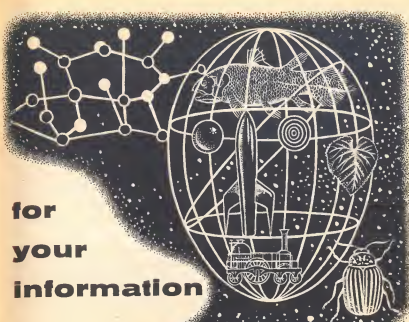
Dark eyes snapped. "And if I say no?"

Johnny shook his head. "The Mali Federation passed some awfully strict laws when it was drawing up its constitution. Among them was one involving capital punishment for anyone destroying a source of water in the desert. Miss Desage did the actual work but you were hand in glove with her. I'd hate to have to report that to your superiors."

Derek jumped forward quickly. His hand snaked out and chopped the other's forearm. The heavy military pistol fell to the floor, and the Canadian kicked it to one side. "Shucks," he drawled, "the hired hand sure is tricky, ain't he?"

"Good Lord," Johnny McCord said disgustedly, "I didn't say I was going to report you. Just threatened to if you didn't resign. Now get out of here, we've got work to do. I'm three days behind on my reports!"

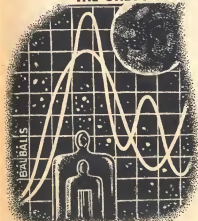
—MACK REYNOLDS



for
your
information

BY WILLY LEY

THE STRAIT NAMED AFTER VITUS BERING



ENGINEER Pyotr Mikhailovitch Borisov is, as his name clearly indicates, a Russian. Professionally he is a mining engineer who has specialized in oil wells. He hopes to be an innovator. And he is a man with an obsession: cold weather. Cold weather, to him, is personified by the Arctic Ocean.

When he speaks about cold weather or the Arctic Ocean he grows eloquent — one might even say heated. "Look at this," he

recently said to one of the editors of the *Literaturnaya Gazyeta*, pointing to a map of the Arctic Ocean, "here in the north the Soviet Union is wide open to the cold air masses blowing in from the Arctic Basin. That is why almost half — in fact, 47 per cent — of Soviet earth is occupied by zones of eternal frost. Over three quarters of our territory the temperature may drop to minus 40 degrees. 15 per cent is nothing but uninhabited wild tundra . . . The cold weather is a beast of prey that devours huge sums of money. The building of factories, power plants and mines in the northeast of the Soviet Union — and in other countries where the climate is identical — is one and a half times or twice as expensive as in districts with a more temperate climate. In the U.S.S.R. cold weather eats up, on the average, 10 per cent of the country's investments."

And what about the losses sustained yearly by the cessation of marine and river transport during the winter? Not to mention the northern sea route, the most labor-consuming and most expensive marine communication in the world?

"The Arctic Ocean is to blame, in the main, for the fact that rice frequently fails to ripen in North Japan and that the north part of

the Yellow Sea freezes over . . . More than any other country, except the U.S.S.R., the United States suffers from the frigid blasts blowing down from the Arctic Ocean. Alaska is a land of severe frosts. The chilly climate of the Arctic Basin pierces the very heart of the United States . . . Then there is Canada with its vast areas of tundras and eternal frosts."

The conclusion to be drawn from these facts is simple to Engineer Borisov: "We must melt the ice sheet of the Arctic Ocean."

As to how this ice sheet formed, he has his own theory too: "It is not because the waters of the oceans are so cold. The fault lies not with the ocean itself, but with the rivers that flow into it: the Ob, Lena and Yenisei, among others. Their fresh waters are lighter than the salty water of the ocean . . . they form an upper mixed layer which freezes over and forms an ice sheet blocking the warmth of the deeper waters."

His idea is that, once this ice sheet is melted and the Arctic Ocean is open water, the solar radiation which is normally reflected by the ice and snow would be absorbed by the water. This, of course, would not transmute the Arctic Ocean into a warm sea. But it should ameliorate the climate of all the coun-

tries that reach beyond or even near the Arctic Circle.

UP to this point everybody is more or less in agreement with Borisov. If the Arctic Ocean were open water, the climate would improve. Nor would there be much danger of flooding, because the ice in question is not piled high on land masses, like the Greenland ice and the ice of Antarctica, but is floating on water. So the volume change if it were melted would be rather minor.

The disagreement begins at the next stop, which is whether it can be done at all and how it could be done.

Borisov thinks that the solution is a dam across the Bering Strait. The width of the Bering Strait is 46 miles and the average depth is about 150 feet. Borisov admits that this would be a big dam. (His estimate of the cost is 70 billion rubles of the old Soviet currency. In the new Soviet currency it would be 7 billion rubles or 14 billion rubles, depending on whether you go by the proclaimed value or by the gold content.) But he is firm in asserting that it would not be an impossible dam.

But the dam would be only the first phase. It is meant to be a barrier stopping uncontrolled flow through the Bering Strait. After the dam has been built,

Borisov wants to install gigantic pumps in several places — the published versions of his idea are by no means clear about the locations of these pumps — which are to remove large amounts of water from the Arctic Ocean. This removal should be made in such a manner that the cold currents now impeding the Gulf Stream would disappear, or at least be greatly weakened, so that the Gulf Stream can enter the Arctic Ocean between Greenland and Norway and melt the surface ice.

Borisov's compatriot, scientist D. A. Drogaytsev, writing in the journal *Priroda* ("Nature"), doesn't think that scheme could possibly work. The only thing that probably could be done would be to build the dam itself. But this would cause "irreparable harm." To the north of the dam the Arctic ice would clog the sea completely and make it unnavigable all year round. The ice would also clog up all the north-flowing rivers of Siberia, and thus destroy the value as transport arteries which they now possess except during the winter months. More, the accumulation of ice along the North Siberian coast would chill the land and extend the Gobi desert and other Asian deserts all the way north to the coastline, destroying areas now fertile. Such tampering with na-

ture, Drogaytsev is positive, can only be bad.

Whether this will stop the discussion is something I would not dare to predict. But I want to add that another discussion about the Bering Sea, in the United States, interested as important a scientist as Charles P. Steinmetz.

Interestingly enough, the idea to which Steinmetz devoted some time (I do not know whether it was completely his own) is the precise opposite of Borisov's plan. Instead of closing the Bering Strait with a dam it should be opened wider.

Look at a map of the Arctic. Both the American continent and the Asian continent extend peninsulas, the Seward Peninsula on the American side and the Chukotski Peninsula on the Siberian side. The narrowest distance between them is 46 miles, as has been mentioned. And to the south of the Bering Strait there is St. Lawrence Island, looking almost like a displaced stopper.

Now, it was said, the fairly warm Japan current comes up from the South, passing by the Japanese Islands and flowing in such a way that it would go into the Arctic Ocean, if St. Lawrence Island and the two peninsulas did not block its way.

If the island and large portions of the two peninsulas could be removed, widening Bering Strait

from 46 to about 200 miles, the Japan current would keep going North. Probably it would split into two currents, one going eastward around Alaska, the other bearing westward along the Siberian coast. In time the waters of this current would melt the floating ice and make the Arctic Ocean an open sea.

Of course the job of removing hundreds of square miles of land is even bigger than Borisov's dam. But there might be a chance of helping the Japan current in a more gentle manner, such as dredging flow channels for it, or even helping the flow along by artificial means.

At any event the Bering Strait — and what might, or should, or should not, be done with it — is going to be a lively theme in years to come.

ONE WORLD — ONE LANGUAGE

That piece, in the February 1960 issue, brought a great deal of comment and for the first time in my life did I *really* understand that sign which you can see in some stores: "If you are displeased, tell us; if you are pleased, tell others." The ones who agreed with me did so loudly, wholeheartedly and so forth, in person. But I did not get a single letter of agreement. However, I got a fair number of letters bawling

me out. Of those who bawled me out one defended Interlingua and five or six defended Esperanto — or rather attacked me for not being in love with it.

One of these was Harry Harrison, whose letter follows here in full. I have something to say about his arguments in four places, so marginal notes follow after that.

One planet — one language! I agree with you that it would be a nice idea if this were possible. I also agree with you that we will probably never have a single "Earth language." (1)

But there is a language that *may* be spoken by all Earthmen that is already in use today — and succeeding quite well. I am speaking of Esperanto, which language got quite a kicking around in your article. In the name of fair play I would like to present the other side of the case, some facts about Esperanto that are rarely heard.

Esperanto is a constructed language that aims to replace no other languages. It works side-by-side with national languages. When you say it *does not work*, I am forced to state blankly that it *does*. In this single case I claim superior knowledge (I would be hard-pressed to find another one!) because I have used it successfully for over fifteen years. I can write and speak it with an automatic ease I have never been able to capture in any language other than my native English. I have sat in groups of up to twelve people

where no *two* people shared the same national language, yet all enjoyed perfect communication with Esperanto. I subscribe to a half dozen magazines from all over the world — out of the eighty-nine listed in the Esperanto yearbook. When I travel I find Esperantists in every city I visit. We are friends as soon as we meet, and speak a common language.

The only thing wrong with Esperanto is that it is new. The world has a high resistance to new ideas. In the U.S. we recognize the value of the decimal system and laugh at the density of the English with their shillings (divide by twenty) and pence (divide by twelve). Then we turn around and do our measuring in yards, feet and inches. How long has the metric system been in use? (2)

You have two arguments against Esperanto, and I think they are both personal ones. When you read Esperanto it, "... sounded too silly." To whom? Finnish is a nightmare to anyone but a Finn. Danes all sound like they are strangling to death when they talk. Esperanto has a *J* for the *Y* sound. *Yes* is spelled *Jes* — and is pronounced and means the same as in English. The people in the linguistic groups that are used to pronouncing *J* this way won't find it strange. It is impossible to make every letter look familiar to every group. This goes for the supersigns as well. In English we say *such* and *sure*, making the letter *S* stand for two different sounds. In Esperanto the *such S* is *S*. The sound that starts *sure* is *S*. Isn't it easier to memorize one new letter than count-

less words? These supersign letters (and there are only six) give Esperanto an exotic look that doesn't exist in reality. Spoken, it sounds very much like Italian or Spanish. (3)

The second thing you have against Esperanto is that most Esperantists "... can probably speak something else that I can." Probably true — if they are Europeans. But how is your Cantonese, Arabian, Japanese or Serbo-Croatian? I have met and enjoyed pleasant conversation with native speakers of these languages — whose only second language was Esperanto. I have a good friend in Italy who speaks fair English. About as good as my Italian. We talk always in Esperanto — though we have both put in thousands of hours of studying each other's native language. (4)

That's the real kicker. You can learn Esperanto in no time flat. Both to read and to speak. It is simple but completely flexible. Irregular forms don't make a language interesting — they just make it hard to learn. In Esperanto you take ten seconds to memorize the fact that the endings of *all* verbs in the past, present and future tenses are *is*, *as* and *os* respectively. Then you can use the saved time to increase your word knowledge and familiarity with the language.

Esperanto may not be the world language — but it *is* the successful language the world could speak!

— HARRY HARRISON

Here are my notes to Harry Harrison's letter:

(1) I could say right here that we have no argument at all, since my discussion was about a language, natural or artificial, which would become the "earth language."

(2) The resistance to new ideas exists, of course, but it is not universal. It seems to depend on whether there is a feeling that this new idea is not really needed. In science (and also in commerce) new ideas are accepted rather fast, if the new idea is one which makes the recipients feel that they needed it.

(3) A few supersigns over letters do not disturb me at all, but it *does* disturb me when one of your Esperantists writes me a letter which begins *Kara amigó*. I shall not accept any explanation of any kind; this is wrong. Either I am male (which happens to be the case) and then the address should be *Karo amigó*. Or else, if I were female, it should read *Kara amiga*. If *Kara amigó* is "right" Esperanto grammar, then its "right" grammar is wrong!

(4) Harry, you are an intelligent man. You cannot have spent "thousands of hours" learning Italian. I can prove it, too. You'll admit that if you concentrate ten minutes a day on learning three words of a language you have learned them so thoroughly that you'll never forget

them again. This, in one year, will net you a vocabulary of 1095 words. In reality, because of the existence of identical or very similar words, your vocabulary will be around 1250 words. Then, at the end of the year, you can learn any grammar, even a complicated one, in a 40-hour week. Hence you spend 61 hours learning 1250 words plus 40 hours learning the grammar which enables you to read a newspaper.

The actual expenditure in time was 100 hours of concentration in the course of one year. Whether this could be done in 100 consecutive hours is something I can't judge since I have never tried it. But you cannot possibly have spent "thousands of hours" on Italian and still feel uncertain when subjected to it!

RE-TAKE OF THE DECEMBER COLUMN

JUDGING from the response, the column in the December issue proved extraordinarily popular. Many readers had something to say about it, and a fair number were able to contribute something which I would have liked to have known when I wrote it. Taking them in their original order, we first had the marine worm, the *palolo* which mates when the moon is right.

You may remember that the

islanders talked to Mr. Powell about *Mbalolo levu* and *Mbalolo lailai*, the "minor" and the "major" appearance. I'll freely admit that my sources phrased their sentences in such a way that one could not tell which word meant which and I had the definite impression that they were not sure. Preferring to be unambiguous, I took a shot in the dark as to which meant "major" and which meant "minor." (of Linguistics and Anthropology) Charles F. Hockett, at the moment Carnegie Visiting Professor at the University of Hawaii, informed me that I missed:

"The words *levu* and *lailai* are Fijian, and their meanings are just the reverse of what you assign in the article. *Levu* is 'big' or 'major'; compare *Viti levu*, 'Major Fiji,' the name of the largest island in the archipelago ... In Fiji, at any rate, the 'small' appearance (*lailai*) precedes the 'large' (*levu*). Two students of mine will be in Fiji for the *Mbalolo levu* season this year; with luck we can find out what they taste like."

I am grateful to Prof. Hockett for the correction — and envious of his students.

The response to the second section, *Slow Lightning*, consisted of half a dozen letters which all read as if they had been written by the same person. In each case

the man (or woman) who wrote the letter said, "Thank you for the article. About fifteen years ago, when I lived in — I saw such a lightning ball but nobody ever believed me. I didn't even talk about it any more, but now that I have this article . . ."

The stories themselves were just typical, as the following example (written by Mr. H. A. J. in Westfield, N.J.) shows:

"Thirty-five years ago I was a camper in a boys camp in Chicopee, Pennsylvania. It was mid or late afternoon. I was sitting on my bunk next to an open window, looking outside at the general area of the camp quadrangle which had just been inundated by a severe thunderstorm. Because of the storm we were in our cabins rather than at an activity. All the windows of these cabins were usually kept open. Suddenly, I saw coming directly toward me a ball of fire, yellow golden in color, about the size of a basketball. It was moving fairly quickly . . . in retrospect I would guess that it was travelling 25 or 30 miles per hour. As I saw it heading toward my window I pulled my head back away from the opening in time to see it pass by my head, go through the cabin to the other side and out an opposite window . . . There was no damage to anyone in the cabin or to the cabin

itself. The ball did not follow a conductor, at least I do not recall any wiring going in the same direction. Perhaps the electrical inlet for the cabin was outside my window. I do not know. There was no noise whatsoever. This I do remember."

Another letter from a Canadian pilot added something new.

He wrote me that a friend (presumably fellow pilot) of his was flying a fast fighter jet over British Columbia at an altitude of 48,000 feet. They were flying so high to avoid the tops of spectacular cumulonimbus towers which were building up over the area. Because the cloud formations were so spectacular the friend of my correspondent took pictures. In a black thundercloud they saw (and photographed) a luminous object. "The second shot shows it obscured by a tongue of cloud but shining through it. The ball must have been about the size of an aircraft [remember that fighter planes are under discussion, not passenger liners] if the visual clues are consistent. Although it appeared to the eye to have well-defined edges, according to the witnesses, the photo shows it definitely fuzzy. Maybe they radiate in the ultraviolet or higher as well."

Apparently in the thundercloud building up a lightning ball did form. That there happened

to be somebody around to see and to photograph it is a lucky coincidence but not new in itself. Lightning balls have been seen to fall out of clouds; hence they must have been in the clouds before. What is new is the estimate of size, which is about a dozen or more times larger than any lightning ball observed near the ground.

Are they larger when forming and contract as they age?

Or does the size correspond more or less to the ambient air pressure? Since the planes were at 48,000 feet to clear the tops of the towers this lightning ball may well have been at 42,000 feet or thereabouts, where the air pressure is down to about 130 millimeters of mercury.

Too bad that with such a fascinating subject we have to depend on luck only!

WITH reference to the third section, *Pinwheels under Water*, Mr. Charles R. Tanner of Cincinnati, Ohio, wrote: "Dig up Charles Fort's *Book of the Damned* Chapter XXI. It seems remarkable to me that the two phenomena should be noted in the same part of the world. When I first read the *Book of the Damned* I remember being impressed by this letter, which seemed to have a ring of truth that not one in a thousand of

Fort's phenomena do have. It stuck in my mind all these years for that reason."

Naturally I reached for Fort's book. I have the one-volume edition published by Henry Holt in 1941. In that edition the twenty-first chapter of the *Book of the Damned* begins, on p. 270, with a letter that appeared in the now defunct magazine *Knowledge* on Dec. 28, 1883. With very minor condensations it reads as follows: "I am tempted to ask for an explanation of the following which I saw when on board the British India Company's steamer *Patna*, while on a voyage up the Persia Gulf. In May, 1880, on a dark night, about 11:30 P.M., there suddenly appeared on each side of the ship an enormous luminous wheel, whirling around, the spokes of which seemed to brush the ship along. The spokes would be 200 or 300 yards long . . . Each wheel contained about sixteen spokes, and, although the wheels must have been some 500 or 600 yards in diameter, the spokes could be distinctly seen all the way round. The phosphorescent gleam seemed to glide along flat on the surface of the sea, no light being visible in the air above the water . . . I may mention that the phenomenon was also seen by Captain Avern, of the *Patna*, and Mr. Manning, third officer."

The signature was "Lee Fore Brace," and below that was a P.S. reading: "The wheels advanced along with the ship for about 20 minutes."

It was probably the silly signature which inspired somebody signing himself "A. Mc. D." to write a letter to the editor which contained the requested explanation: "It is that before 11:30 P.M. there had been numerous accidents to the 'main brace' and that it had required splicing so often that almost any ray of light would have taken a rotary motion."

In the issue dated January 25, 1884, the original correspondent, now signing his letter. "J. W. Robertson," complained: "I do think it's rather unjust to say a man is drunk because he sees something out of the common."

Charles Fort, after meandering around for several pages in his characteristic and intensely annoying manner, then does quote a few more cases of the same sort of phenomenon.

One (the source is identified as *Journal of the Royal Meteorological Society*, 28-29) states that Captain Hoseason of the ship *Kilwa* saw vast "ripples" of light appeared suddenly. "Ripple" followed upon "ripple." The light was faint, appeared suddenly and died out gradually in about fifteen minutes. Time and place:

April 4, 1901, about 8:30 P.M. in the Persian Gulf.

Another one (from *Nature*, 20-291) is a report by Captain Evans that Commander J. E. Pringle of H. M. S. *Vulture* had seen rapidly moving luminous waves or pulsations in the water. "On looking toward the east, that appearance was that of a revolving wheel with a center on that bearing, and whose spokes were illuminated, and, looking toward the west, a similar wheel appeared to be revolving, but in the opposite direction." (Commander Pringle considered the second wheel an optical illusion but was firm about the first one. He estimated the width of each shaft of light about 25 feet, the spaces between them about 100 feet. Duration of the phenomenon: about 35 minutes. Time: 9:40 P.M. Location: Lat. $26^{\circ}26'N$, Long. $53^{\circ}11'E$, in the Persian Gulf. The date was May 15, 1879.

FORT stated that the *Journal of the Royal Meteorological Society* (32-280) contained excerpts from a letter written by Mr. Douglas Carnegie saying that in 1906 he saw a bank of apparently quiet phosphorescence. But when the ship came close, "shafts of brilliant light came sweeping across the ship's bows . . . These light bars were about 20 feet apart and most regular . . . They

first struck us on our broadside and I noticed that an intervening ship had no effect on the light beams: they started away from the lee sides of the ship just as if they had travelled right through it."

The place was the Gulf of Oman, the entrance to the Persian Gulf.

Fort has two more cases, one with the date of June 5, 1880, off the coast of Malabar and one with the date of March 14, 1907, in the Malacca Strait. The Malabar coast is the western coast of the Indian Peninsula, the direct continuation of the coastline which is the eastern shore of the Persian Gulf and the Gulf of Oman. The Malacca Strait is the water separating the Malay Peninsula from Sumatra.

I wish to state that I did not have the time to check the sources given by Fort. It is therefore possible that Fort, by condensing and shortening the reports, left out detail which to other eyes than his would have been significant. He does mention that Mr. Carnegie scooped up a bucket of water during the event and later examined samples under a microscope without finding anything unusual. He also mentions that Commander Pringle reported the sea "before and after the display" as having floating patches of fish spawn.

Of the seven cases just mentioned (the seventh is, of course, the one reported by Commander Bodler and quoted in the December issue) just one is geographically far removed from the other six, the one from the Malacca Strait. It differs from others also as to the time of day, or rather of night, since it was seen at 2 A.M. All others were seen before midnight.

From the few reports available a few patterns emerge. One has just been mentioned: the phenomenon is usually seen between the beginning of darkness and midnight.

The second pattern is the time of the year. The one seen from the ship *Kilwa* occurred on April 4; the one seen from board of the *Vulture* on May 15. The one seen from the ship *Patna* was also in May. The phenomenon off the Malabar coast dates June 5. The one from the Gulf of Oman is undated, except for the year. Commander Bodler's case occurred on November 14, 1949. It is the only one in Fall. All others that are dated (including the Malacca Strait case which was in March) were seen in Spring or late Spring.

But the most interesting pattern is the geographical one.

Of a total of seven known, four were seen in the Persian Gulf, one in the Gulf of Oman (a di-

rectly adjacent body of water) and one off the Malabar coast—which is still an adjacent body of water, though a considerable distance away when expressed in miles. Does the Persian Gulf differ in any respect from other bodies of water? Yes, there is one difference. It has a higher salinity. The three bodies of water with the highest salinity are the Dead Sea in Palestine, the Great Salt Lake in the United States and the Bay of Kara-Bogaz-Gol, on the eastern shore of the Caspian Sea. But they are all unconnected with the oceans. The Persian Gulf has the highest salinity of any body of water accessible from the ocean. And, of course, it has a hot climate.

The concentration of the sightings in a very salty arm of the sea and the concentration in the Spring may be of importance. As I said in the December issue, it is my impression that it was a biological phenomenon which was seen.

But even this suggestion is in the nature of a wild guess.

The only truthful thing one can say is that we don't know.

ANY QUESTIONS?

Please find enclosed an article about radiation danger in space from today's *New York Times*

(Nov. 27, 1960.) I would appreciate it very much if you told me your personal opinion of whether radiation danger in space will prevent manned space travel.

Elizabeth, New Jersey
Dorothy Steinfeld

Well, my personal opinion about this (and a few other things) is that the purpose of a difficulty is that it should be overcome. But for the sake of the readers generally it should be explained that we are dealing with several sources of radiation in space. To begin with, our Sun (and probably every other star) emits X-rays along with visible radiation, heat rays and radio waves. But our Sun is a very weak X-ray star. There may be other stars which are powerful X-ray stars; but that is a problem for the next generation. In short, the direct X-rays from our sun will be stopped by the skin of the vessel.

The second source of radiation in space is what physicists still call by the German name of *Bremsstrahlung*. The term was originally coined by the discoverer of the X-rays, Prof. Dr. Konrad Röntgen and since so few physicists dealt with this phenomenon on the one hand, and since it is hard to translate on the other hand, nobody bothered to

invent an English term. The one I have used in magazine articles, namely "impact radiation," seems to come closest. What happens is that X-rays are produced when an electron is stopped in its flight by a solid body. (That is what the German term coined by Dr. Röntgen means: *Strahlung* means "radiation" while *bremsen* means "to brake" or "to bring to a stop.") Such impact radiation will be produced by any solid body, including spaceships, in the Van Allen belt. However, Dr. James A. Van Allen, after whom the belts are named, believes that his outer belt could be penetrated fast enough so that comparatively little shielding would be needed. In fact the skin of the ship, plus its meteor bumper, would probably be thicker than is needed to make a radiation shield for this particular danger.

What has just been said was mainly with reference to the outer of the two Van Allen belts. The inner belt is likely to be nastier. But it can easily be avoided, since it reaches only from about 40° northern to about 40° southern latitude.

The current worry deals with sudden outbursts of protons from our sun. Satellite *Explorer VII*, in November 1960, ran into a proton burst where an average of 10,000 protons per square centimeter per second were encoun-

tered. Earlier bursts, also reported by *Explorer VII*, had ranged from 10 to 200 protons per square centimeter per second. That heavy burst amounted to about 50 roentgens of radiation — an awful lot, since 450 roentgens is the dose which kills half of its victims within 30 days of exposure.

The real problem, then, is these outbursts from the sun—partly because they can be lethal, partly because they do not seem predictable. Of course one can shield against them, but it would be a heavy weight which the ship would have to carry around. Some scientists have suggested what they half-jokingly called "storm cellars," heavily shielded capsules aboard the ship, metal cocoons into which the crew members would slip as soon as the detectors begin to chatter. The unsolved problem here is whether these outbursts which come from the Sun just disappear into space or whether they are reflected back by magnetic fields far from the Sun, possibly outside the solar system. If they just come from the Sun and disappear into space with no reflection worth mentioning, the radiation shield could be very much like an old warrior's shield, a heavy slightly curved metal plate which is always held over the sunward side of the ship.

Naturally a single shield of this kind would weigh much less than "storm cellars" for every crew member. And it would not interfere with operations, either.

To find out whether we deal with a shielding problem in all direction or in one direction only is a special project called *Project Ranger*, which is slated to get underway in midsummer of 1961.

In the past you have often written about forthcoming space events in your column. I notice that you don't do this any more. Why?

Albert Reznicek
Hollywood, Calif.

In the past *Galaxy* was a monthly, which meant that less time went by between writing my column and its appearance on the newsstands. Also, in the past space events were much rarer than they are now.

Just look what happened in August, 1960: *Discoverer XIII* was, as its name says, the 13th satellite that was fired into a polar orbit with the intent to recover its capsule. That this was intended was announced from the first shot on; but who could foretell that number thirteen would be the first one where recovery would be successful? (The capsule was fished from the ocean.) That shot was made on

August 10. On August 12 *Echo* went into orbit. *Echo* had also been in the planning stage for a long time. On August 18 *Discoverer XIV* went into orbit, and its capsule was promptly recovered the next day. And on that day the Russians put *Sputnik V* into orbit — then recovered it (as a whole, even though the animal capsule was separated with a parachute after re-entry) on August 20. Only the daily paper can keep up now. And even the daily paper will limp somewhat behind on occasion.

But I can tell you about space events which are planned sufficiently far ahead so that you'll be able to read this before the newspapers make headlines out of them:

The manned capsule (*Project Mercury*) is due in Fall, 1961; though the program has shown some slippage it may still meet its own deadline. For 1962, several interplanetary unmanned probes are planned (*Project Mariner*) for both Mars and Venus. For 1963, *Project Surveyor* is planned. This involves the "soft" landing of a 600-pound instrument capsule on the moon. Most likely Wernher von Braun's *Saturn* will put communications satellites into the 24-hour orbit during the same year. For 1964, *Project Voyager* is foreseen, larger and more sophisticated probes to

Mars and Venus with the hope that they can be actually landed. For 1965, we have *Project Prospector*, the landing of a small mobile tank-like vehicle on the moon which can be directed to move around and TV-scan whatever gets in its way. For 1966 or 1967 we expect *Project Rover*, the nuclear-powered rocket, to go into space; and for 1967 or 1968 we expect *Project Apollo* to do

its job, which is a manned flight around the moon without landing.

And we better hurry *Project Apollo* (and everything else) . . . or one of the pictures taken by the crew of *Project Apollo* will be a nice sharp photograph of a lunar structure with a name like Ziolkovsky Base or Soviet Outpost No. 1.

— WILLY LEY

★ ★ ★ ★ ★



Did you read the May

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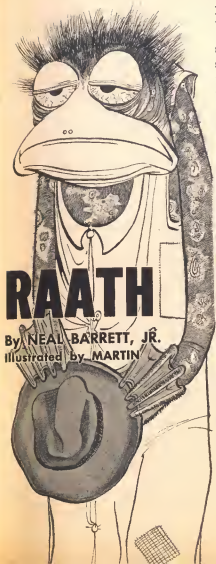
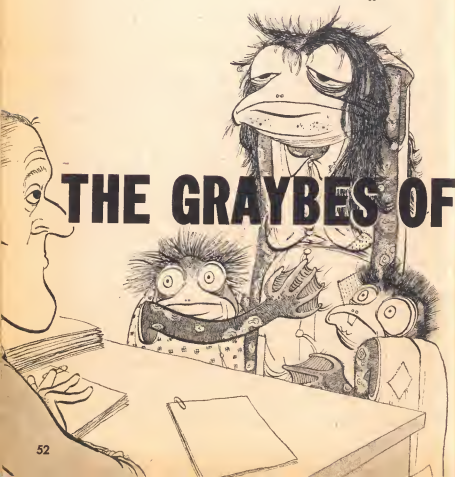
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There are worse things than
coming down with an epidemic
— like not catching it, and
filling in for those who do!



By NEAL BARRETT, JR.
Illustrated by MARTIN

I'D forgotten how The Pit smells. I'd also forgotten my nose filters. The second I opened the door to HUM/OXY the stink hit me like a tidal wave. It was all coming back to me — I hadn't been away *that* long.

They were all there, every shape, size and color; clambering, sweating, shoving, clutching their records in their wet hands, getting sick from their shots. They probably thought it smelled, too. I gagged my way through to the main desk and past the gate. The receptionist jerked up, annoyed.

"Hey! You'll have to get to the end of the — oh! Yes?" She spotted my white and gray T-12 rating and added: "—sir?"

"I'm Steuberk," I said, trying to hold my breath, "filling in for some jerk with the plague. Where am I? I mean, where am I supposed to be?"

She consulted a list. "Oh. Mr. Steuberk. Room 909." She looked at me queerly.

"No nose filters, Mr. Steuberk?"

"Do!" I choked, "Do dose vilders. You hab sub?"

"No," she said, "but I'm sure Miss Cress will. Why didn't you use the back lift, sir?"

"I haben't bid — I haven't been here for a long time, miss!" I snapped.

She glanced at the rating again, and blushed slightly. "Oh. No, of

course not, sir. In there and to your right, Mr. Steuberk. Go right in."

IT wasn't much better in the inner hall. They were there, too, half a dozen at each door, waiting for their interviews. I found 909, went in, and leaned weakly against the door.

"Filters, miss, filters!"

The girl at the desk looked up, frowning. Then understanding dawned on her pretty face. She slit one of the little packages with her nails and handed it to me. I jammed them up my nostrils and took a deep breath. Better.

"I'm Steuberk," I said, "filling in for — for —"

"Mr. Harris," she said. "I'm Leeta Cress."

She was a long-legged ash blonde with black eyes. The way the eyes tilted she was probably a Cythian Hybrid, Showgirl Class. What she was doing as a T-4 secretary is anybody's guess.

"Yes, Mr. Steuberk?" One eyebrow tilted defiantly.

"Oh. Yes. Well — let's get on with it, shall we?"

"Yes," she said, "let's do that."

I went around to my own desk, which was at right angles to hers. I took out a cigarette, lit it and nodded to Miss Cress. She pressed a button and spoke into her intercom.

"Number K dash four-four-

eight-one-six. You may come in now, please."

I pulled the top folder from the stack on my desk, noted the number was correct, and opened it. There was one paper in the folder, the Preliminary History Form CC-4. It was absolutely blank. I frowned at Miss Cress.

"I know," she shrugged. "All the T-1 Clerks are out too, Mr. Steuberk. We'll just have to start from scratch."

"Just what," I asked curiously, "is the matter with you people? Don't you take your shots down here?"

She nodded. "It's something MED/SEC didn't catch in the last ship. Kripstian Trot, I think."

I bit my cigarette. "Kripstian Trot, Miss Cress?" It sounded awful. "What does it do?"

Miss Cress reddened. "Mr. Steuberk, I'd rather not —"

I waved her off. "Okay, okay. Forget it."

We were saved by the door. There was a hesitant knock, and Miss Cress released the lock from her desk panel. In they came.

I've seen 'em all. I've been with REF/RELIEF, IMM/EM and RELOC since the war ended fifteen years ago. I've pulled my way up the bureaucratic ladder from T-2 Lice Jockey to Counselor. I've worked in a hot suit in the COLEOP/METH tanks and I've even (as a T-3, of course)

hosed out the Sleepers. I thought I'd managed a long time ago to keep my feelings out of my work. I have 'em, all right. We all do, or we wouldn't be here. But we know we're here to help people, not feel sorry for them, and you learn pretty quick that pity is a very infectious disease.

I couldn't help it. It was impossible not to feel sorry for the sad-looking creatures that filed in through the door. There were four of them, two adults and two children. Officially, they were Refugees, Bipedal, Humanoid, Oxygen-breathers. Unofficially — they were a mess.

I'll try to explain it: If frogs were blue, and if blue frogs had orange hair covering their bodies, and if blue, orange-haired frogs came down with a bad case of poison ivy and mange — they'd be standing in my office, molting all over the floor.

I looked at Miss Cress and she swallowed hard.

"Names, please?" she asked.

THE tall male shuffled forward a step. He was dressed like the others, in a faded smock patched and washed to the limit of endurance. He was bent at the waist, and his shoulders sloped in a deep curve toward his hollow chest. He looked as if he were carrying a heavy, invisible load on his back. They all did.

"Name's Graybe, ma'am. I're Sut, this here's Sari, and the youngun's is Joak an' Luti."

I bit my lip and looked down at my desk. I recognized the accent the minute he opened his mouth. This was going to be a tough one. Getting a refugee, a misplaced person, back to his home world is bad enough. Most of them wouldn't be here if they still had worlds to go to. But that was nothing compared to Sut Graybe and his family. They were migratory workers — a pre-war phenomenon now extinct — unwanted, unsponsored, unanything. I might convince someone to put Sut on a quota list — at the bottom — in about twenty years.

"What's your home planet, Mr. Graybe?" I asked. I knew we might as well toss out the forms on this one. The Labor Corps was already overcrowded, and there aren't many decent jobs a live organism can do any more as well or as cheap as a robot. And those that are left require stronger stuff than the Graybes. The only hope we had was finding his own world — if it still existed — and trying to get him back among his own.

Sut Graybe hesitated a moment, glanced at his feet and said:

"Well, suh, I reckon we's born on Raath, suh, 'cept fer the kids.

Course thass a long time ago, warn't it, Sari?" His wife nodded solemnly. The two children gazed wide-eyed about the room, clinging to their mother's drab gray smock.

Miss Cress verified the spelling, and ran "Raath" through the tapes. In a moment we had fourteen possibilities, allowing for phonetic latitude and pronunciation. Nine we ruled out immediately. They could not support an oxygen-breather. One, "Rayyt," had no intelligent life, and another, "Wretsh," had belonged to the Enemy — and it was now a bright light around the beak of Cygnus. That left three.

Slides of the native life and geography of Ritk, Ratiki and Root brought definite noes from the Graybes. We were stuck on the ground.

"I don't suppose you know the coordinates of Raath, Mr. Graybe?"

The question brought nothing but bewilderment to the faces of Sut and Sari.

"Sector? System? Nearby stars?" Nothing. I turned to Miss Cress. "Maybe it's uncatalogued."

Miss Cress chewed thoughtfully on her knuckle a moment, then shook her head. "Have to be pretty old, Mr. Steuberk. Or real new."

"Yeah. Is there any other name for Raath, Sut? Do you

ever call it by anything else?"

Sut turned to his wife. "No suh, reckon not. Jest Raath — all we evah knowed."

Meanwhile, Miss Cress telefaxed photos of the Graybes to ANTHRO/REC and brought us up against another blank. Graybe's race, as well as his world, was uncatalogued. Not that that was unusual. We've mapped maybe one-quarter of the galaxy and half of that's still pretty wild and woolly. I looked at my watch. We were getting nowhere and there were plenty of others waiting.

SUT Graybe continued to be a goldmine of information. His home star was "kinda big an' yellor" — I could have guessed that. He reckoned the constellations, as seen from Raath, were "right purty." Swell.

"Mr. Steuberk?" I turned to Miss Cress. She was making motions with her hands around her shoulders. I raised an eyebrow. They were nice shoulders, but I didn't think she had anything like that in mind.

"His tag, Mr. Steuberk," she said firmly.

"Oh." I had forgotten the big paper ID card the refugees wear. I examined Sut's. I shuddered and looked at Miss Cress.

"Gomal," I said. She looked away.

"I didn't think anyone got off Gomal," I told Mr. Graybe.

He shook his head, remembering. "Warn't many, suh. Guess we's mighty lucky folks."

I guessed so too. I knew what had happened on Gomal.

"What were you doing there, Sut?"

"We's pickin' Skibi blossoms — warn't thet it, Sari? Them little purty pink 'uns?" Sari nodded sadly.

"And before Gomal?"

He answered readily. "Fredrickson Two. We's bringin' in the bananapple crop. Mighty hot, suh. Mighty hard work." Sari nodded sadly.

At least we were getting somewhere. Slowly. Sut Graybe was able to remember working on Trev, Eynthion, Psyche, Vix, Ornsburg, Gryphon and about two dozen more. The Graybes had seen more worlds than a Navy Chief!

About halfway through the second dozen something began to worry me. Even if you're riding the Star Fields a lot of time passes between worlds, and I knew those big lunky Long-Sleepers took their time with a frozen human cargo. If he'd spent only a day or two on each world, even, he —

"Mr. Graybe," I asked suddenly, "just what is your lifespan?"

He looked at me, puzzled.

"Let's put it another way. How long does the average — uh, do most people live on Rath?"

His face brightened with understanding. "Oh, yes, suh. Nine, ten hunnert years, ah reckon."

I sat up straight. "What?"

Miss Cress bit her knuckle and the eyebrows went up again.

"In *Standard* years, Mr. Graybe? You know what a *Standard* year is, don't you?"

"Yes suh, reckon ah do that. 'Bout four hunnert days, ain't it?"

"Uh, yes," I said slowly.

"That's correct."

"Exactly how old are you then, Mr. Graybe?" asked Leeta Cress.

He turned to his wife. "Bout five hunnert, reckon." He grinned. "I'se oldern' Sari. 'Course she don't like to 'zactly give her age — you know how wimminfolks is, ah reckon, ma'am."

I took a deep breath. Well, it was certainly not impossible. There are a few long-lived races in the Union, though I'd never heard of any humanoid ones over two or two-fifty. Still, it made sense — if you wanted to look at it like that. It was the *only* way he could have seen all those worlds in one lifetime by Long-Sleeper.

"You're sure, Mr. Graybe? You're sure it's five hundred *Standard* years? You're not using some other calendar?"

"No suh, reckon ah five hunnert, all right." He chuckled. "Feel like it sometimes, anyways." I took another look at him. It was possible all right . . .

I scribbled a note on a piece of paper and handed it to Miss Cress. Then I wrote another one for the Graybes. Miss Cress frowned at me over her pretty nose.

I ignored her.

"Mr. Graybe," I said, "I want you and your family to go to this room." I handed him the paper. "Now. You'll be told what to do there. Then I'd like to ask you to do one more thing. I want you and Mrs. Graybe to go back to the Camp, and I want you to list every world you've ever worked on, starting back with, uh — Korby, yes, that was the last one we got to. Do you think you can do that, Mr. Graybe?"

He scratched his head and ran a long webbed hand over his face. "Ah shore try, suh. It been a heap a places, though."

I leaned toward him over my desk. "It would help a lot, Mr. Graybe, if you could just tell us the first world you worked on after Raath. Sure you can't remember that?"

"Naw," he said slowly, "it gonna take a little stewin'. Best ah works back slow like, way we's a-doin' heah."

"Okay. You do the best you

can. And come back at the same time tomorrow."

He nodded, and his shaggy brood dragged out after him. I turned to Leeta Cress. She was shaking her head slowly, like I was the boy who wrote the dirty word on the blackboard.

"That just isn't done. Mr. Steuber," she said darkly.

"It isn't, eh? You sent the order up the tube, didn't you?"

"I did. But I don't like it. You can't go — shoving every other case to the head of the line. They'll get a physical anyway, you know."

"Sure," I said, "in about eight months. I want one now."

She let out a deep sigh. "All right, Mr. Steuber, but it isn't the way Mr. Harris would have handled it."

I scowled. "Mr. Harris has the Galloping Rot, Miss Cress."

"The Kriptian Trot, Mr. Steuber," she sniffed.

WE got through about half a dozen more cases without much trouble. We closed up shop and I asked Leeta Cress if she'd care to have dinner with me and — bang — we were in trouble again. So I had dinner by myself and a few drinks in the Red Tape Bar. I couldn't get the Graybes out of my mind. I made a note to have Research take a special look for Raath tomorrow,

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just in case it had gotten misplaced somewhere. I've worked in Research, too. We lost a whole System once behind a filing cabinet.

Meanwhile I had something else on my mind. Besides Miss Cress. I hopped a cab, rode across town and set down at the StarDome. It was late, and I didn't figure any of the big brains would be using it this time of night. I went in, sat down before the big panel and pressed GENERAL VIEW. The lights dimmed and the round ceiling lit up with a panorama of the Galaxy. Before I left the office I had copied down the planets Graybe had already given us, and now I took my notebook out and punched the names into the board. I pressed for CLOSE-UP and the galaxy dropped down on top of me.

Now I was looking at roughly one-quarter of the big lens, centering in the Union. Everything was bright, sparkling and well-defined until the edge, which dimmed on out to places we hadn't been, but could map, then on to a vague luminosity that was someone's general idea of Galactic Central.

The planets I had coded appeared as oversize red dots on the map. I connected them with a thin white line, in order of Graybe's migration, pulled a Tridi shield over my eyes, and

brought the picture up as far as I could and still keep everyone in view.

I now had a dimensional idea of Graybe's travels — and it told me absolutely nothing. If there was any pattern or direction, it was related to the picking season of the Zidze nuts or some damn thing, and that wasn't likely to show up on the StarDome.

Before I went to bed I called a guy I knew in MED/SEC and asked him what the symptoms were of the Kriptian Trot. He was asleep and it served me right for asking. He told me. *Well!*

I used the back lift this time, and I didn't forget my nose filters. There were two things waiting for me at the office: Miss Cress and a phone call. She handed me the number with a sugary smile, like Lucretia Borgia passing the cup.

The call was from Zack Miles in MED/SEC. The screen showed a tired, basset-faced character with a crooked smile.

He looked at me happily. "You been demoted, Steuberk? Not surprised."

"No," I explained, "I'm filling in down here. Whole section's out with —" I caught Leeta Cress' eye — "with, ah, this new disease."

"Yeah." He grinned nastily. "I know. Been up in Bio all morn-

ing trying to catch it." Miss Cress mouth opened and she fled the room.

"Look," said Zack, "about those characters —"

"Well?"

He shrugged. "Too early to give you anything definite. They could be, mind you they *could* be, what they say. Just had time for a preliminary check. Can you get 'em back up here?"

I promised I would and asked: "Is Sut Graybe really five hundred years old?"

Zack scowled. "Let's put it this way. He has the body of a not-too-well preserved man of fifty. If his life expectancy is one thousand, like he claims, then that would work out about right."

"But you don't know for sure. Is that it?"

"I don't," said Zack patiently, "because I haven't finished the tests. But, yes — okay — probably is. And I figure his 'kids,' if you'll pardon the expression, are about eighty and a hundred. The woman won't talk but she's around four-fifty."

"Oh, yes," I said seriously, "if she's a day."

Zack ignored me. "Listen, Steu, where is this Raath, anyway?"

"It's a terrific place," I said, "you live to be a thousand and all the girls have got the Kriptian Trot."

He leered a second, daydream-

ing, and hung up. I turned. Miss Cress was standing in the door. I grinned sheepishly.

"You'll just have to put up with me, Miss Cress. Harris *still* has the —" Her hands clapped over her ears. I had a feeling we wouldn't have that dinner tonight, either.

The Graybes filed in about four — only six hours late. Sut's eyes were droopier and more bloodshot than usual, and Sari didn't look much better. Orange hair fluttered to the floor in great clumps.

"Well, Sut, how did you do?"

He shook his head doubtfully and handed me the list. "Sorry we's late, suh, but me 'n Sari done our bes', tryin' to rec'lecl all them places. We's up all night, reckon."

"Oh, now, that wasn't necessary Sut, we —" I stopped. I had glanced down at the list. In a scrawly, crabbed hand, Sut had painfully set down, in reverse order, each planet he had visited, the approximate date, and in most cases the crops they picked.

But that wasn't what threw me. There were over two hundred and fifty names on the list. I clutched the paper tightly.

"Are you sure, Sut? You've been to *all* these places? You're not just making this up?"

He looked pained. "No suh, ah ain't. Reckon ah knows wheah ah been, all right, suh."

I raised a hand in peace. "Okay. Okay, I believe you, Sut." I glanced at the bottom of the list. Yuvor.

"Well now we're getting somewhere," I said. "Miss Cress, run Yuvor, Y-U-V-O-R, through the tapes. You're sure this is the first world you hit after Raath, eh?"

His eyes widened and he shook his head violently. Orange hair floated to every corner of the room.

"No, suh! You don't unnerstan', suh!"

I rubbed a hand wearily across my face. "What, Mr. Graybe, what don't I understand?"

"Well, suh, like ah said, we done our bes', but we fallin' sleep fore we's finished."

I didn't say a word for a minute. I stared at Sut, then at Miss Cress. Miss Cress was definitely better looking.

"All right," I said calmly as possible. "All right, Sut. You go back. Yes. You go back and finish the list. Then come back."

He grinned. The whole hairy crew shuffled out again. I laid my head in my hands. I looked at my watch. It was five.

"Miss Cress . . . ?"

She shook her head sweetly. "No, Mr. Steuberk."

I FOUGHT the temptation to run the new planets through the StarDome. I'd wait until Sut

— correction: *if* Sut, finished his list. I skipped dinner and had a drink in the Red Tape Bar. I had two drinks. I had three — oh, never mind.

I couldn't find the back lift in the morning. Miss Cress shook her pretty head sadly. "You look terrible, Mr. Steuberk."

I said, "Shut up, Miss Cress." She ignored me.

"They're waiting for you," she said.

I looked up. It sounded ominous. "Who? The little men?"

"No sir. The Graybes. With Dr. Zack." She frowned. "Miles."

I lit a shaky cigarette. "Okay. Let's get it over with."

Zack filed in after the Graybes, leered at Leeta and leaned over my desk. "You look terrible, Steu."

"I know. I've been informed."

He beamed hopefully. "You lucky devil, you don't suppose you're coming down with —"

"Never mind, it's just a hang-over. Some doctor. Well, what did you find?"

He shrugged. "It's true. They are genuine long-lifers, all right. I borrowed a carbon-dater from Physics, tried it on a cell sample. They replace tissue about every seventy-five years."

I looked up. "Carbon-dater? I thought —"

He shook his head. "Course, the radioactivity involved is —"

"Never mind. I'll take your word for it. Anything else?"

He hesitated. "Maybe. Don't know. The kids have a funny kind of squiggly line in their brain-wave pattern. The adults don't."

"A funny squiggly line?" I said acidly. "Are you sure you're a doctor, Zack?"

Zack is not sensitive. He went on. I don't know what it is. All I know is the kids have it — parents don't. And I'd like to say you've advanced the science of Geriatrics tremendously — but I can't. We've been over them pretty thoroughly. They're old, all right. I just don't know *why*."

"Okay," I said, "stick around if you want to. If we ever find Raath, maybe you can ask the head man, the uh —"

"Raathskeller?"

I winced and turned to Sut. "Well, think you've got the whole thing now, Mr. Graybe?"

He shuffled forward, handed me the list. "Ah reckon so, suh. Purt' near busted mah haid, a-thinkin' so much."

He crackled, nudging Sari in the ribs. I looked at the names. There were only about twenty additions. I hurried through, said the last name aloud.

"Crohznar. Is that it, Sut? The first place you worked after Raath?"

He nodded. "Yes suh, that it,

awright. Tol'ble purty, too. We's pickin' them big ol' Gushi buds an' —"

I stood up. "Fine. Miss Cress?" "You want me to run Crohznar through the tape, Mr. Steuberk?"

"No. I want you to call us a cab for the StarDome. A *big* cab."

Miss Cress frowned. "Oh, we can't close up like that, Mr. Steuberk, we —"

"Miss Cress," I said darkly, "are you coming or aren't you? Dr. Miles thinks I may be coming down with something. Any minute, now. Do you know what he thinks I have, Miss Cress?"

She paled, bringing her hand to her face.

"All right, then. Let's get out of here."

WE made a great picture trailing up the steps to the StarDome. Zack, Leeta Cress, me and the molting Graybes. I sat them all down and had Zack feed me the names on the lists. Granted, I could have worked from Crohznar alone, but I wanted, if possible, to get a full directional picture of the trip from there to Gomal, where the Graybes were picked up. I pressed for CLOSE-UP again and a chorus of Oooooohs and Aaaaaaahs went up from the Graybes.

I pulled the Tridi shield over my eyes and brought up the mag-

nification. They were all there. Gomal back to Crohznar and all points in between. The picture was a little clearer now, but not much. The Graybes hadn't traveled in any orderly direction from Crohznar. They had gone where the work was, and the connecting white lines made a crazy pattern over half the Union. Still, there was a general, if ill-defined, drift from Sector II of the Union, where Crohznar was, "downward" toward Gomal.

I called Sut to the panel, explained the situation as well as I could and pulled a Tridi over his eyes.

"Mighty purty," said Sut.

"Terrific. Now look, Sut, I've shown you where Crohznar is. And you can see the route you took to Gomal. You took pretty average hops all the way, so it stands to reason Raath is probably about as far from Crohznar as your average jump. Does anything around there look familiar?"

"No, suh. Sho' don't," he said sorrowfully.

"Nothing?"

"No, suh. Jest a heap a purty lights, suh."

I slapped my head. "Okay, hold it, Sut." I dialed a view of the constellations as seen from Crohznar.

"Now, Sut? That's the way the stars look from the first planet

you worked on after Raath. Doesn't *anything* look familiar?"

He shook his head sadly. I pulled the Tridi off his eyes. I looked at Zack and Leeta Cress. They shrugged helplessly.

I lit a cigarette and leaned toward Sut. "Now think," I told him. "Can you remember how long it took to get from Raath to Crohznar? Did anyone on the LongSleeper ever mention how much *Standard* time, how much *real* time it would take? I know it was a long time ago, but try to remember."

Sut scratched his head and looked at me queerly.

"Now what's the matter?" I asked.

"Well, suh, it jest ah can't rightly tell how long they takes from Raath. Don' see how ah kin."

I frowned. "Why not?"

"Well, suh, we didn' take no LongSleeper from Raath to that place."

I let out a deep breath. "Okay, Sut," I said sarcastically, "how did you go? Plushline?"

Sut thought that was a riot. "No, suh," he laughed, "reckon not. Me 'n Sari, we swift-thunk it."

I could feel the hairs crawling up the back of my neck.

"Swift-thunk?"

"Yes, suh. Pickin's was right pore on Raath, an' we's both

purty young an' spry, 'bout two hunnert, reckon. So we swift-thunk 'bout some nice place what had work fer us an' we's jus' up and thar."

No one said a thing. Finally Zack broke the silence.

"Steu? Is he trying to say what I think he's trying to say?"

I nodded. "Uh-huh." My voice came out a little dry. "He thinks he and Sari *teleported* from Raath."

"**NONSENSE!**" scoffed Zack, a little nervously for an honest-to-goodness scoff, "if they had any psi, operating or latent, we would have caught it on the tests. If they ever had it, they sure as hell don't have it now."

"You talkin' 'bout swift-thinkin', suh?" Sut interrupted. "You right, suh, we ain't got it no more. Can't do it when you is old, suh. Reckon we done use all ours up a-gettin' there," he laughed.

I turned slowly to Zack. "Those — squiggly lines?"

He swallowed hard. "Yep."

"Sut," I said, "why didn't you say something about this before?"

"Didn' ask, suh. Didn't say nuthin' 'bout swift-thinkin'. Jes' wantin' to know whar Raath is."

"If he's telling the truth," I said, "and I wish I could believe he isn't — we might as well give up Raath. He doesn't know where it is, either."

"What do you mean?" asked Zack.

"If he swift-thu — teleported at random, he wouldn't have any idea what Raath looks like from a distance, only what the rest of the sky looks like from Raath. And if he didn't come from anywhere near Crohznar—"

"Oh, ah 'spect we know our home when we see it, suh," said Sut.

That was too much. "Then you're lying about the whole thing," I yelled at him. "You couldn't know!"

"You don' unnerstan' bout us, I reckon," he said. "We kinda feels whar home is, even 'haps we can't see it. Gotta know, see, so we kin git back. Can't do that no more; done used up all our swift-thinkin', but can't never fer-git. always got that, even if you can't do nuthin'. Don' know whar Raath is, suh, but if I's evah to see it again, 'spect I'd surely know."

Zack, Leeta and I just looked at each other. No one said a word.

Then Sut said: "Reckon you could brighten this here thing up more than you has it? Lemme take another peek? I'd be powerful happy was I to find it 'gin."

I leaned over and boosted the magnification as far as it would go.

For maybe two minutes, Sut

moved the scanner all over the StarDome. Then, a wide grin stretched over his face.

"Sari, come look! There she is! Shore purty from here!"

I moved up. Sut grabbed my arm and pulled me to the scanner.

"There 'tis, suh. Right there. She look a lot different from heah, but that it, awright. See there? That bright, sorta fuzzy star 'neath thet big-n."

I looked. This time the chill started at my feet and kept going.

"That — one, Sut?"

"Yes suh, that it all right."

I pointed it out to Zack and Leeta. I grinned stupidly.

"That one," I said.

"Mr. Steuberk?"

"Yes, Miss Cress?"

"Now."

"Now, what?"

"Now," she said, "I'm ready

for that drink, Mr. Steuberk."

I don't know what became of the Graybes of Raath. I'm not supposed to know. But I do know one thing — there are no Gushi buds to pick at Union Security Headquarters, so they must be up to something else over there. I imagine those boys have a few questions for Sut and Sari. And I'll give you ten to one they don't have an answer between them. Maybe we'll know when the Graybe kids reach maturity — in about a hundred years. I won't, of course, but Leeta and I'll have some grandchildren who might.

Every once in a while I burst out laughing just thinking about it. Do you suppose that sorry-looking, mangy-haired lout really did *swift-think* here from that fuzzy looking "star" —

— from Andromeda?

— NEAL BARRETT, JR.

★ ★ ★ ★ ★

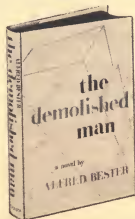
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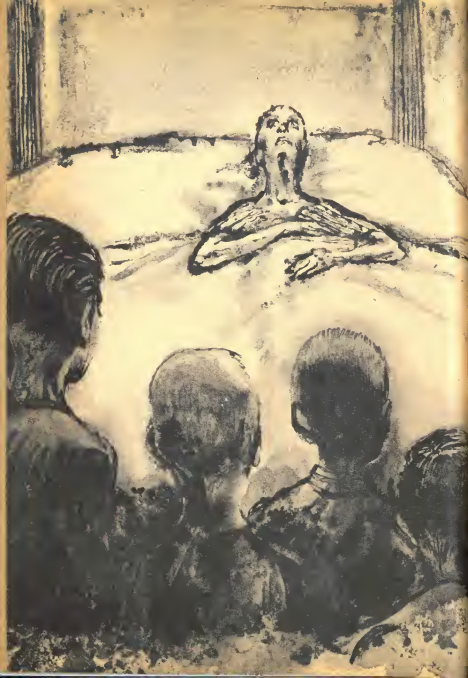
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ELPHEN DeBeckett lay dying. It was time. He had lived in the world for one hundred and nine years, though he had seen little enough of it except for the children. The children, thank God, still came. He thought they were with him now: "Coppie," he whispered in a shriveled voice, "how nice to see you." The nurse did not look around, although she was the only person in the room besides himself, and knew that he was not addressing her.

The nurse was preparing the injections the doctor had ordered her to have ready. This little capsule for shock, this to rally his strength, these half-dozen others to shield him from his pain. Most of them would be used. DeBeckett was dying in a pain that once would have been unbearable and even now caused him to thresh about sometimes and moan.

DeBeckett's room was a great twelve-foot chamber with hanging drapes and murals that reflected scenes from his books. The man himself was tiny, gnome-like. He became even less material while death (prosey biology, the chemistry of colloids) drew inappropriately near his head. He had lived his life remote from everything a normal man surrounds himself with. He now seemed hardly alive enough to die.

DeBeckett lay in a vast, pilared bed, all the vaster for the small burden he put on it, and the white linen was whiter for his merry brown face. "Darling Veddie, please don't cry," he whispered restlessly, and the nurse took up a hypodermic syringe. He was not in unusual pain, though, and she put it back and sat down beside him.

The world had been gentle with the gentle old man. It had made him a present of this bed and this linen, this great house with its attendant horde of machines to feed and warm and comfort him, and the land on which stood the tiny, quaint houses he loved better. It had given him a park in the mountains, well stocked with lambs, deer and birds of blazing, spectacular color, a fenced park where no one ever went but DeBeckett and the beloved children, where earth-moving machines had scooped out a Very Own Pond ("My Very Own Pond/Which I sing for you in this song/Is eight Hippopotamuses Wide/And twenty Elephants Long.") He had not seen it for years, but he knew it was there. The world had given him, most of all, money, more money than he could ever want. He had tried to give it back (gently, hopefully, in a way pathetically), but there was always more. Even now the world

showered him with gifts and doctors, though neither could prevail against the stomping pitchfire arsonist in the old man's colon. The disease, a form of gastroenteritis, could have been cured; medicine had come that far long since. But not in a body that clung so lightly to life.

He opened his eyes and said strongly, "Nurse, are the children there?"

The nurse was a woman of nearly sixty. That was why she had been chosen. The new medicine was utterly beyond her in theory, but she could follow directions; and she loved Elphen DeBeckett. Her love was the love of a child, for a thumbled edition of *Coppie Brambles* had brightened her infancy. She said, "Of course they are, Mr. DeBeckett."

He smiled. The old man loved children very much. They had been his whole life. The hardest part of his dying was that nothing of his own flesh would be left, no son, no grandchild, no one. He had never married. He would have given almost anything to have a child of his blood with him now — almost anything, except the lurid, grunting price nature exacts, for DeBeckett had never known a woman. His only children were the phantoms of his books . . . and those who came to visit him. He said faintly, "Let the little sweetlings in."

THE nurse slipped out and the door closed silently behind her. Six children and three adults waited patiently outside, DeBeckett's doctor among them. Quickly she gave him the dimensions of the old man's illness, pulse and temperature, and the readings of the tiny gleaming dials by his pillow as well, though she did not know what they measured. It did not matter. She knew what the doctor was going to say before he said it: "He can't last another hour. It is astonishing that he lasted this long," he added, "but we will have lost something when he goes."

"He wants you to come in. Especially you—" She glanced around, embarrassed. "Especially you children." She had almost said "little sweetlings" herself, but did not quite dare. Only Elphen DeBeckett could talk like that, even to children. Especially to children. Especially to these children, poised, calm, beautiful, strong and gay. Only the prettiest, sweetest children visited Elphen DeBeckett, half a dozen or a score every day, a year-in, year-out pilgrimage. He would not have noticed if they had been ugly and dull, of course. To DeBeckett all children were sweet, beautiful and bright.

They entered and ranged themselves around the bed, and DeBeckett looked up. The eyes

regarded them and a dying voice said, "Please read to me," with such resolute sweetness that it frightened. "From my book," it added, though they knew well enough what he meant.

The children looked at each other. They ranged from four to eleven, Will, Mike, blonde Celine, brown-eyed Karen, fat Freddy and busy Pat. "You," said Pat, who was seven.

"No," said five-year-old Freddy. "Will."

"Celine," said Will. "Here."

The girl named Celine took the book from him and began obediently. "Coppie thought to herself—"

"No," said Pat. "Open."

The girl opened the book, embarrassed, glancing at the dying old man. He was smiling at her without amusement, only love. She began to read:

Coppie thought to herself that the geese might be hungry, for she herself ate Lotsandlots. Mumsie often said so, though Coppie had never found out what that mysterious food might be. She could not find any, so took some bread from Brigid Marie Ann-Erica Evangeline, the Cook Whose Name Was So Long That She Couldn't Remember It All Herself. As she walked along Dusty Path to Coppie Brambles's Very Own Pond—

Celine hesitated, looking at the old man with sharp worry, for he had moaned faintly, like a flower moaning. "No, love," he said. "Go on." The swelling soft bubble before his heart had turned on him, but he knew he still had time.

The little girl read:

—As she walked along Dusty Path to Coppie Brambles's Very Own Pond, she thought and thought, and what she thought finally came right out of her mouth. It was a Real Gay Think, to be Thought While Charitably Feeding Geese:

They don't make noise like little girls and boys,
And all day long they're aswimming.

They never fret and sputter
'cause they haven't any butter,
They go where the water's
wetly brimming.

But say—
Anyway—
I
Like
Geese!

There was more, but the child paused and, after a moment, closed the book. DeBeckett was no longer listening. He was whispering to himself.

On the wall before him was painted a copy of one of the illustrations from the first edition of his book, a delightful picture of Coppie Brambles herself, feed-

ing the geese, admirably showing her shyness and her trace of fear, contrasted with the loutish comedy of the geese. The old man's eyes were fixed on the picture as he whispered. They guessed he was talking to Coppie, the child of eight dressed in the fashions of eighty years ago. They could hardly hear him, but in the silence that fell on the room his voice grew stronger.

He was saying, without joy but without regret, "No more meadows, no more of the laughter of little children. But I do love them." He opened his eyes and sat up, waving the nurse away. "No, my dear," he said cheerfully, "it does not matter if I sit up now, you know. Excuse me for my rudeness. Excuse an old and tired man who, for a moment, wished to live on. I have something to say to you all."

The nurse, catching a sign from the doctor, took up another hypodermic and made it ready. "Please, Mr. DeBeckett," she said. Good humored, he permitted her to spray the surface of his wrist with a fine mist of droplets that touched the skin and penetrated it. "I suppose that is to give me strength," he said. "Well, I am grateful for it. I know I must leave you, but there is something I would like to know. I have wondered . . . For years I have wondered, but I have not

been able to understand the answers when I was told them. I think I have only this one more chance."

HE felt stronger from the fluid that now coursed through his veins, and accepted without fear the price he would have to pay for it. "As you know," he said; "or, I should say, as you children no doubt do not know, some years ago I endowed a research institution, the Coppie Brambles Foundation. I did it for the love of you, you and all of you. Last night I was reading the letter I wrote my attorneys—No. Let us see if you can understand the letter itself; I have it here. Will, can you read?"

Will was nine, freckled darkly on pale skin, red haired and gangling. "Yes, Mr. DeBeckett."

"Even hard words," smiled the dying man.

"Yes, sir."

DeBeckett gestured at the table beside him, and the boy obediently took up a stiff sheet of paper. "Please," said DeBeckett, and the boy began to read in a high-pitched, rapid whine.

"Children have been all my life and I have not regretted an instant of the years I devoted to their happiness. If I can tell them a little of the wonderful world in which we are, if I can open to

them the miracles of life and living, then my joy is unbounded. This I have tried, rather selfishly, to do. I cannot say it was for them! It was for me. For nothing could have given me more pleasure."

The boy paused.

DeBeckett said gravely, "I'm afraid this is a Very Big Think, lovelings. Please try to understand. This is the letter I wrote to my attorneys when I instructed them to set up the Foundation. Go on, Will."

"But my way of working has been unscientific, I know. I am told that children are not less than we adults, but more. I am told that the grown-up maimers and cheats in the world are only children soiled, that the hagglers of commerce are the infant dreamers whose dreams were denied. I am told that youth is wilder, freer, better than age, which I believe with all my heart, not needing the stories of twenty-year-old mathematicians and infant Mozarts to lay a proof.

"In the course of my work I have been given great material rewards. I wish that this money be spent for those I love. I have worked with the heart, but perhaps my money can help someone to work with the mind, in this great new science of psychology which I do not under-

stand, in all of the other sciences which I understand even less. I must hire other eyes.

"I direct, then, that all of my assets other than my books and my homes be converted into cash, and that this money be used to further the study of the child, with the aim of releasing him from the corrupt adult cloak that smothers him, of freeing him for wisdom, tenderness and love."

"That," said DeBeckett sadly, "was forty years ago."

HE started at a sound. Overhead a rocket was clapping through the sky, and DeBeckett looked wildly around. "It's all right, Mr. DeBeckett," comforted little Pat. "It's only a plane."

He allowed her to soothe him. "Ah, loving," he said. "And can you answer my question?"

"What it says in the 'Cyclopedia, Mr. DeBeckett?"

"Why— Yes, if you know it, my dear."

Surprisingly the child said, as if by rote: "The Institute was founded in 1976 and at once attracted most of the great workers in pediatric analysis, who were able to show Wiltshauer's Effect in the relationship between glandular and mental development. Within less than ten years a new projective analysis of the growth process permitted a re-

orientation of basic pedagogy from a null-positive locus. The effects were immediate. The first generation of—"

She stopped, startled. The old man was up on his elbow, his eyes blazing at her in wonder and fright. "I'm—" She looked around at the other children for help and at once wailed, "I'm sorry, Mr. DeBeckett!" and began to cry.

The old man fell back, staring at her with a sort of unbelieving panic. The little girl wept abundantly. Slowly DeBeckett's expression relaxed and he managed a sketchy smile.

He said, "There, sweetest. You startled me. But it was charming of you to memorize all that!"

"I learned it for you," she sobbed.

"I didn't understand. Don't cry." Obediently the little girl dried her eyes as DeBeckett stretched out a hand to her.

But the hand dropped back on the quilt. Age, surprise and the drug had allied to overmaster the dwindling resources of Elphen DeBeckett. He wandered to the phantoms on the wall. "I never understood what they did with my money," he told Coppie, who smiled at him with a shy, painted smile. "The children kept coming, but they never said."

"Poor man," said Will absently, watching him with a child's uncommitted look.

The nurse's eyes were bright and wet. She reached for the hypodermic, but the doctor shook his head.

"Wait," he said, and walked to the bed. He stood on tiptoe to peer into the dying man's face. "No, no use. Too old. Can't survive organ transplant, certainty of cytic shock. No feasible therapy." The nurse's eyes were now flowing. The doctor said to her, with patience but not very much patience, "No alternative. Only kept him going this long from gratitude."

The nurse sobbed, "Isn't there *anything* we can do for him?"

"Yes." The doctor gestured, and the lights on the diagnostic dials winked out. "We can let him die."

LITTLE Pat hiked herself up on a chair, much too large for her, and dangled her feet. "Be nice to get rid of this furniture, anyway," she said. "Well, nurse? He's dead. Don't wait." The nurse looked rebelliously at the doctor, but the doctor only nodded. Sadly the nurse went to the door and admitted the adults who had waited outside. The four of them surrounded the body and bore it gently through the door. Before it closed the nurse looked back and wailed: "He loved you!"

The children did not appear to notice. After a moment Pat

said reflectively, "Sorry about the book. Should have opened it."

"He didn't notice," said Will, wiping his hands. He had touched the old man's fingers.

"No. Hate crying, though."

The doctor said, "Nice of you. Helped him, I think." He picked up the phone and ordered a demolition crew for the house. "Monument?"

"Oh, yes," said another child. "Well. Small one, anyway."

The doctor, who was nine, said, "Funny. Without him, what? A few hundred thousand dollars and the Foundation makes a flexible world, no more rigid adults, no more —" He caught himself narrowly. The doctor had observed before that he had a tendency to over-identify with adults, probably because his specialty had been geriatrics. Now that Elphen DeBeckett was dead, he no longer had a specialty.

"Miss him somehow," said Celine frankly, coming over to look over Will's shoulder at the quaint old murals on the wall. "What the nurse said, true enough. He loved us."

"And clearly we loved him," piped Freddy, methodically sorting through the contents of the dead man's desk. "Would have terminated him with the others otherwise, wouldn't we?"

—FREDERIK POHL &
C. M. KORNBLUTH

THE WEIRDEST WORLD

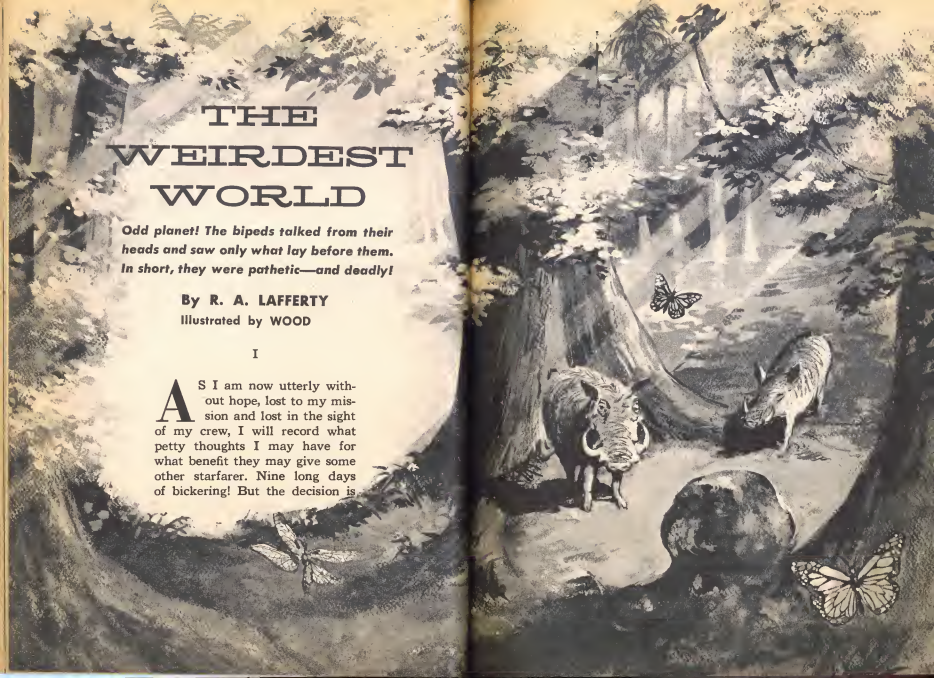
*Odd planet! The bipeds talked from their
heads and saw only what lay before them.
In short, they were pathetic—and deadly!*

By R. A. LAFFERTY

Illustrated by WOOD

I

AS I am now utterly without hope, lost to my mission and lost in the sight of my crew, I will record what petty thoughts I may have for what benefit they may give some other starfarer. Nine long days of bickering! But the decision is



sure. The crew will maroon me. I have lost all control over them.

Who could have believed that I would show such weakness when crossing the barrier? By all the tests I should have been the strongest. But the final test is the event itself. I failed.

I only hope that it is a pleasant and habitable planet where they put me down . . .

Later. They have decided. I am no longer the captain even in name. But they have compassion on me. They will do what they can for my comfort. I believe they have already selected my desert island, so to speak, an out-of-the-way globe where they will leave me to die. I will hope for the best. I no longer have any voice in their councils . . .

Later. I will be put down with only the basic survival kit: the ejection mortar and sphere for my last testament to be orbited into the galactic drift; a small cosmoscope so that I will at least have my bearings; one change of blood; an abridged universal language correlator; a compendium of the one thousand philosophic questions yet unsolved to exercise my mind; a small vial of bug-kill; and a stack of sexy magazines . . .

Later. It has been selected. But my mind has grown so demoralized that I do not even rec-

ognize the system, though once this particular region was my specialty. The globe will be habitable. There will be breathable atmosphere which will allow me to dispense with much bothersome equipment. Here the filler used is nitrogen, yet it will not matter. I have breathed nitrogen before. There will be water, much of it saline, but sufficient quantities of sweet. Food will be no problem; before being marooned, I will receive injections that should last me for the rest of my probably short life. Gravity will be within the range of my constitution.

What will be lacking? Nothing but the companionship of my own kind, which is everything.

What a terrible thing it is to be marooned!

ONE of my teachers used to say that the only unforgivable sin in the universe is ineptitude. That I should be the first to succumb to space-ineptitude and be an awkward burden on the rest of them! But it would be disastrous for them to try to travel any longer with a sick man, particularly as their nominal leader. I would be a shadow over them. I hold them no rancor.

It will be today . . .

Later. I am here. I have no real interest in defining where

"here" is, though I have my cosmoscope and could easily determine it. I was anesthetized a few hours before, and put down here in my sleep. The blasted half-acre of their landing is near. No other trace of them is left.

Yet it is a good choice and not greatly unlike home. It is the nearest resemblance I have seen on the entire voyage, which is to say that the pseudodendrons are enough like trees to remind me of trees, the herbage near enough to grass to satisfy one who had never known real grass. It is a green, somewhat waterlogged land of pleasant temperature.

The only inhabitants I have encountered are a preoccupied race of hump-backed browsers who pay me scant notice. These are quadruped and myopic, and spend nearly their entire time at feeding. It may be that I am invisible to them. Yet they hear my voice and shy away somewhat from it. I am able to communicate with them only poorly. Their only vocalization is a sort of vibrant windy roar, but when I answer in kind, they appear more puzzled than communicative.

They have this peculiarity: when they come to an obstacle of terrain or thicket, they either go laboriously around it or force their way through it. It does not seem to occur to them to fly over

it. They are as gravity-bound as a newborn baby.

What air-traveling creatures I have met are of a considerably smaller size. These are more vocal than the myopic quadrupeds, and I have had some success in conversing with them, but my results still await a more leisurely semantic interpretation. Such communications of theirs as I have analyzed are quite commonplace. They have no real philosophy and are singularly lacking in aspiration; they are almost total extroverts and have no more than the rudiments of introspection.

Yet they have managed to tell me some amusing anecdotes. They are quite good-natured, though moronic.

They say that neither they nor the myopic quadrupeds are the dominant race here, but rather a large grublike creature lacking a complete outer covering. From what they are able to convey of this breed, it is a nightmarish kind of creation. One of the flyers even told me that the giant grubs travel upright on a bifurcated tail, but this is difficult to credit. Besides, I believe that humor is at least a minor component of the mentality of my airy friends. I will call them birds, though they are but a sorry caricature of the birds at home. . .

LATER. I am being hunted. I am being hunted by the giant grubs. Doubling back, I have seen them on my trail, examining it with great curiosity.

The birds had given me a very inadequate idea of these. They are indeed unfinished — they do lack a complete outer covering. Despite their giant size, I am convinced that they are grubs, living under rocks and in masses of rotten wood. Nothing in nature gives the impression of so lacking an outer covering as the grub, that obese, unfinished worm.

These are, however, simple bipeds. They are wrapped in a cocoon which they seem never to have shed, as though their emergence from the larval state were incomplete. It is a loose artificial sheath covering the central portion of the corpus. They seem never to divest themselves of it, though it is definitely not a part of the body. When I have analyzed their minds, I will know the reason for their carrying it. Now I can only conjecture. It would seem a compulsion, some psychological bond that dooms them in their apparent adult state to carry their cocoons with them.

Later, I am captured by three of the giant grubs. I had barely time to swallow my communication sphere. They pinned me down and beat me with sticks. I

was taken by surprise and was not momentarily able to solve their language, though it came to me after a short interval. It was discordant and vocal and entirely gravity-bound, by which I mean that its thoughts were chained to its words. There seemed nothing in them above the vocal. In this the giant grubs were less than the birds, even though they had a practical power and cogency that the birds lacked.

"What'll we do with the blob?" asked one.

"Why," said the second, "you hit it on that end and I'll hit it on this. We don't know which end is the head."

"Let's try it for bait," said the third. "Catfish might go for it."

"We could keep it alive till we're ready to use it. Then it would stay fresh."

"No, let's kill it. It doesn't look too fresh, even the way it is."

"Gentlemen, you are making a mistake," I said. "I have done nothing to merit death. And I am not without talent. Besides, you have not considered the possibility that I may be forced to kill you three instead. I will not die willingly. Also I will thank you to stop pounding on me with those sticks. It hurts."

I was surprised and shocked at the sound of my own voice. It

was nearly as harsh as that of the grubs. But this was my first attempt at their language, and musicality does not become it.

"Hey, fellows, did you hear that? Was that the blob talking? Or was one of you playing a joke? Harry? Stanley? Have you been practicing to be ventriloquists?"

"Not me."

"Not me either. It sure sounded like it was it."

"Hey, blob, was that you? Can you talk, blob?"

"CERTAINLY I can talk," I responded. "I am not an infant. Nor am I a blob. I am a creature superior to your own kind, if you are examples. Or it may be that you are only children. Perhaps you are still in the pupa stage. Tell me, is yours an early stage, or an arrested development, or are you indeed adult?"

"Hey, fellows, we don't have to take that from any blob. I'll cave in its blasted head."

"That's its tail."

"It's its head. It's the end it talks with."

"Gentlemen, perhaps I can set you straight," I said. "That is my tail you are thwacking with that stick, and I am warning you to stop it. Of course I was talking with my tail. I was only doing it in imitation of you. I am new at

the language and its manner of speaking. Yet it may be that I have made a grotesque mistake. Is that your heads that you are waving in the air? Well, then, I will talk with my head, if that is the custom. But I warn you again not to hit me on either end with those sticks."

"Hey, fellows, I bet we could sell that thing. I bet we could sell it to Billy Wilkins for his Reptile Farm."

"How would we get it there?"

"Make it walk. Hey blob, can you walk?"

"I can travel, certainly, but I would not stagger along precariously on a pair of flesh stilts with my head in the air, as you do. When I travel, I do not travel upside down."

"Well, let's go, then. We're going to sell you to Billy Wilkins for his Reptile Farm. If he can use a blob, he'll put you in one of the tanks with the big turtles and alligators. You think you'll like them?"

"I am lonesome in this lost world," I replied sadly, "and even the company of you peeled grubs is better than nothing. I am anxious to adopt a family and settle down here for what years of life I have left. It may be that I will find compatibility with the species you mention. I do not know what they are."

"Hey, fellows, this blob isn't a

bad guy at all. I'd shake your hand; blob, if I knew where it was. Let's go to Billy Wilkins' place and sell him."

II

WE traveled to Billy Wilkins' place. My friends were amazed when I took to the air and believed that I had deserted them. They had no cause to distrust me. Without them I would have had to rely on intuition to reach Billy Wilkins, and even then I would lack the proper introductions.

"Hey, Billy," said my loudest friend, whose name was Cecil, "what will you give us for a blob? It flies and talks and isn't a bad fellow at all. You'd get more tourists to come to your reptile show if you had a talking blob in it. He could sing songs and tell stories. I bet he could even play the guitar."

"Well, Cecil, I'll just give you all ten dollars for it and try to figure out what it is later. I'm a little ahead on my hunches now, so I can afford to gamble on this one. I can always pickle it and exhibit it as a genuine hippopotamus kidney."

"Thank you, Billy. Take care of yourself, blob."

"Good-by for now, gentlemen," I said. "I would like you to visit me some evening as soon as I

am acclimated to my new surroundings. I will throw a whinging for you—as soon as I find out what a whing-ding is."

"My God," said Billy Wilkins, "it talks! It really talks!"

"We told you it could talk and fly, Billy."

"It talks, it talks," said Billy. "Where's that blasted sign painter? Eustace, come here. We got to paint a new sign!"

The turtles in the tank I was put into did have a sound basic philosophy which was absent in the walking grubs. But they were slow and lacking inner fire. They would not be obnoxious company, but neither would they give me excitement and warmth. I was really more interested in the walking grubs.

Eustace was a black grub, while the others had all been white; but like them he had no outside casing of his own, and like them he also staggered about on flesh stilts with his head in the air.

It wasn't that I was naive or hadn't seen bipeds before. But I don't believe anyone ever became entirely accustomed to seeing a biped travel in its peculiar manner.

"Good afternoon, Eustace," I said pleasantly enough. The eyes of Eustace were large and white. He was a more handsome specimen than the other grubs.



"That you talking, bub? Say, you really can talk, can't you? I thought Mr. Billy was fooling. Now just you hold that expression a minute and let me get it set in my mind. I can paint anything, once I get it set in my mind. What's your name, blob? Have blobs names?"

"Not in your manner. With us the name and the soul, I believe you call it, are the same thing and cannot be vocalized, so I will have to adopt a name of your sort. What would be a good name?"

"Bub, I was always partial to George Albert Leroy Ellery. That was my grandfather's name."

"Should I also have a family name?"

"Sure."

"What would you suggest?"

"How about McIntosh?"

"That will be fine. I will use it."

I TALKED to the turtles while Eustace was painting my portrait on tent canvas.

"Is the name of this world Florida?" I asked one of them. "The road signs said Florida."

"World, world, world, water, water, water, glub, glug, glub," said one of them.

"Yes, but is this particular world we are on named Florida?"

"World, world, water, water, glub," said another.

"Eustace, I can get nothing from these fellows," I called. "Is this world named Florida?"

"Mr. George Albert, you are right in the middle of Florida, the greatest state in the universe."

"Having traveled, Eustace, I have great reservations that it is the greatest. But it is my new home and I must cultivate a loyalty to it."

I went up in a tree to give advice to two young birds trying to construct a nest. This was obviously their first venture.

"You are going about it all wrong," I told them. "First consider that this will be your home, and then consider how you can make your home most beautiful."

"This is the way they've always built them," said one of the birds.

"There must be an element of utility, yes," I told them. "But the dominant motif should be beauty. The impression of expanded vistas can be given by long low walls and parapets."

"This is the way they've always built them," said the other bird.

"Remember to embody new developments," I said. "Just say to yourself, 'This is the newest nest in the world.' Always say

that about any task you attempt. It inspires you."

"This is the way they've always built them," said the birds. "Go build your own nest."

"Mr. George Albert," called Eustace, "Mr. Billy won't like your flying around those trees. You're supposed to stay in your tank."

"I was only getting a little air and talking to the birds," I said. "You can talk to the birds?" asked Eustace.

"Cannot anyone?"

"I can, a little," said Eustace. "I didn't know anyone else could."

But when Billy Wilkins returned and heard the report that I had been flying about, I was put in the snake house, in a cage that was tightly meshed top and sides. My cellmate was a surly python named Pete.

"See you stay on that side," said Pete. "You're too big for me to swallow. But I might try."

"There is something bothering you, Pete," I said. "You have a bad disposition. That can come only from a bad digestion or a bad conscience"

"I have both," said Pete. "The first is because I bolt my food. The second is because — well, I forget the reason, but it's my conscience."

"Think hard, Pete. Why have you a bad conscience?"

"Snakes always have bad consciences. We have forgotten the crime, but we remember the guilt."

"Perhaps you should seek advice from someone, Pete."

"I kind of think it was someone's smooth advice that started us on all this. He talked the legs right off us."

BILLY WILKINS came to the cage with another "man," as the walking grubs call themselves.

"That it?" asked the other man. "And you say it can talk?"

"Of course I talk," I answered for Billy Wilkins. "I have never known a creature who couldn't talk in some manner. My name is George Albert Leroy Ellery McIntosh. I don't believe that I heard yours, sir."

"Bracken. Blackjack Bracken. I was telling Billy here that if he really had a blob that could talk, I might be able to use it in my night club. We could have you here at the Snake Ranch in the daytime for the tourists and kids. Then I could have you at the club at night. We could work out an act. Do you think you could learn to play the guitar?"

"Probably. But it would be much easier for me merely to duplicate the sound."

"But then how could you sing

and make guitar noise at the same time?"

"You surely don't think I am limited to one voice box?"

"Oh. I didn't know. What's that big metal ball you have there?"

"That's my communication sphere, to record my thoughts. I would not be without it. When in danger, I swallow it. When in extreme danger, I will have to escape to a spot where I have concealed my ejection mortar, and send my sphere into the galactic drift on a chance that it may be found."

"That's no kind of gag to put in an act. What I have in mind is something like this."

Blackjack Bracken told a joke. It was a childish one and in poor taste.

"I don't believe that is quite my style," I said.

"All right, what would you suggest?"

"I thought that I might lecture your patrons on the Higher Ethic."

"Look, George Albert, my patrons don't even have the lower ethic."

"And just what sort of recompense are we talking about?" I asked.

"Billy and I had about settled on a hundred and fifty a week."

"A hundred and fifty for whom?"

"Why, for Billy."

"Let us make it a hundred and fifty for myself, and ten per cent for Billy as my agent."

"Say, this blob's real smart, isn't he, Billy?"

"Too smart."

"Yes, sir, George Albert, you're one smart blob. What kind of contract have you signed with Billy here?"

"No contract."

"Just a gentlemen's agreement?"

"No agreement."

"Billy, you can't hold him in a cage without a contract. That's slavery. It's against the law."

"But, Blackjack, a blob isn't people."

"Try proving that in court. Will you sign a contract with me, George Albert?"

"I will not dump Billy. He befriended me and gave me a home with the turtles and snakes. I will sign a joint contract with the two of you. We will discuss terms tomorrow—after I have estimated the attendance both here and at the night club."

III

OF the walking grubs (who call themselves "people") there are two kinds, and they place great emphasis on the difference. From this stems a large part of their difficulties. This dis-

inction, which is one of polarity, cuts quite across the years and ability and station of life. It is not confined only to the people grubs, but also involves apparently all the beings on the planet Florida.

It appears that a person is committed to one or the other polarity at the beginning of life, maintaining that polarity until death. The interlocking attraction-repulsion complex set up by these two opposable types has deep emotional involvements. It is the cause of considerable concern and disturbance, as well as desire and inspiration. There is a sort of poetic penumbra about the whole thing that tends to disguise its basic simplicity, expressible as a simultaneous polarity equation.

Complete segregation of the two types seems impossible. If it has ever been tried, it has now evidently been abandoned as impractical.

There is indeed an intangible difference between the two types, so that before that first day at the Reptile Ranch was finished, I was able to differentiate between the two more than ninety per cent of the time. The knowledge of this difference in polarity seems to be intuitive.

These two I will call the Beta and Gamma, or Boy and Girl, types. I began to see that this

opposability of the two types was one of the great driving forces of the people.

In the evening I was transported to the night club and I was a success. I would not entertain them with blue jokes or blue lyrics, but the patrons seemed fascinated by my simple imitations of all the instruments of the orchestra and my singing of comic ballads that Eustace had taught me in odd moments that day. They were also interested in the way that I drank gin—that is, emptying the bottle without breaking the seal. (It seems that the grub-people are unable to absorb a liquid without making direct contact with it.)

And I met Margaret, one of the "girl" singers.

I had been wondering to which type of people I might show affinity. Now I knew. I was definitely a Beta type, for I was attracted to Margaret, who was unmistakably a Gamma. I began to understand the queer effect that these types have on each other.

She came over to my cage.

"I want to rub your head for good luck before I go on," she said.

"Thank you, Margaret," I replied, "but that is not my head."

She sang with incomparable sadness, with all the sorrow and sordidness that appear to be the

lot of unfortunate Gammas. It was the essence of melancholy made into music. It was a little bit like the ghost music on the asteroid Artemis, a little like the death chants on Dolmena. Sex and sorrow. Nostalgia. Regret.

Her singing shook me with a yearning that had no precedent. She came back to my cage.

"You were wonderful, Margaret," I said.

"I'm always wonderful when I'm singing for my supper. I am less wonderful in the rare times that I am well fed. But are you happy, little buddy?"

"I had become almost so, till I heard you sing. Now I am overcome with sorrow and longing. Margaret, I am fascinated with you."

"I go for you too, blob. You're my buddy. Isn't it funny that the only buddy I have in the world is a blob? But if you'd seen some of the guys I've been married to—boy! I wouldn't insult you by calling them blobs. Have to go now. See you tomorrow night—if they keep us both on."

NOW there was a problem to face. It was necessary that I establish control over my environment, and at once. How else could I aspire to Margaret?

I knew that the heart of the entire place here was neither the bar nor the entertainment there-

in, nor the cuisine, nor the dancing. The heart of the enterprise was the Casino. Here was the money that mattered; the rest was but garnish.

I had them bring me into the gambling rooms.

I had expected problems of complexity here with which the patrons worked for their gain or loss. Instead there was an almost amazing simplicity. All the games were based on first aspect numbers only. Indeed, everything on the Planet Florida seemed based on first aspect numbers.

Now it is an elemental fact that first aspect numbers do not carry within them their own prediction. Nor were the people even possessed of the prediction key that lies over the very threshold of the second aspect series.

These people were actually wagering sums—the symbols of prosperity—blindly, not knowing for sure whether they would win or lose. They were selecting numbers by hunch or at random with no assurance of profit. They were choosing a hole for a ball to fall into without knowing whether that was the right hole!

I do not believe that I was ever so amazed at anything in my life.

But here was my opportunity to establish control over my environment.

I began to play the games.

Usually I would watch a round first, to be sure that I understood just what was going on. Then I would play a few times . . . as many as it took to break the game.

I broke game after game. When he could no longer pay me, Blackjack closed the Casino in exasperation.

Then we played poker, he and I and several others. This was even more simple. I suddenly realized that the grub-people could see only one side of the cards at a time.

I played and I won.

I owned the Casino now, and all of those people were now working for me. Billy Wilkins also played with us, so that in short order I also owned the Reptile Ranch.

Before the evening was over, I owned a race track, a beach hotel, and a theater in a place named New York.

I had begun to establish control over my environment . . .

LATER. Now started the golden days. I increased my control and did what I could for my friends.

I got a good doctor for my old friend and roommate, Pete the python, and he began receiving treatment for his indigestion. I got a jazzy sports car for my friend Eustace imported from

somewhere called Italy. And I buried Margaret in mink, for she had a fix on the fur of that mysterious animal. She enjoyed draping it about her in the form of coats, capes, cloaks, mantles and stoles, though the weather didn't really require it.

I had now won several banks, a railroad, an airline, and a casino in somewhere named Havana.

"You're somebody now," said Margaret. "You really ought to dress better. Or are you dressed? I never know. I don't know if part of that is clothes or if all of it is you. But at least I've learned which is your head. I think we should be married in May. It's so common to be married in June. Just imagine me being Mrs. George Albert Leroy Ellery McIntosh! You know, we have become quite an item. And do you know there are three biographies of you out—*Burgeoning Blob*, *The Blob from Way Out*, *The Hidden Hand Behind the Blob—What Does it Portend?*

And the governor has invited us to dine tomorrow. I do wish you would learn to eat. If you weren't so nice, you'd be creepy. I always say there's nothing wrong with marrying a man, or a blob, with money. It shows foresight on the part of a girl. You know you will have to get a blood test? You had better get it tomorrow.

You do have blood, don't you?"

I did, but not, of course, of the color and viscosity of hers. But I could give it that color and viscosity temporarily. And it would react negative in all the tests.

She mused, "They are all jealous of me. They say they wouldn't marry a blob. They mean they couldn't . . . Do you have to carry that tin ball with you all the time?"

"Yes. It is my communication sphere. In it I record my thoughts. I would be lost without it."

"Oh, like a diary. How quaint!"

Yes, those were the golden days. The grubs appeared to me in a new light, for was not Margaret also a grub? Yet she seemed not so unfinished as the rest. Though lacking a natural outer casing, she had not the appearance of crawling out from under a rock. She was quite an attractive "girl." And she cared for me.

What more could I wish? I was affluent. I was respected. I was in control of my environment. And I could aid my friends, of whom I had now acquired an astonishing number.

Moreover, my old space-inaptitude sickness had left me. I never felt better in my life. Ah, golden days, one after the other like a pleasant dream. And soon I am to be married!

IV

THERE has been a sudden change. As on the Planet Hecube, where full summer turns into the dead of the winter in minutes, to the destruction of many travelers, so was it here. My world is threatened!

It is tottering, all that I have built up. I will fight. I will have the best lawyers on the planet. I am not done. But I am threatened. . .

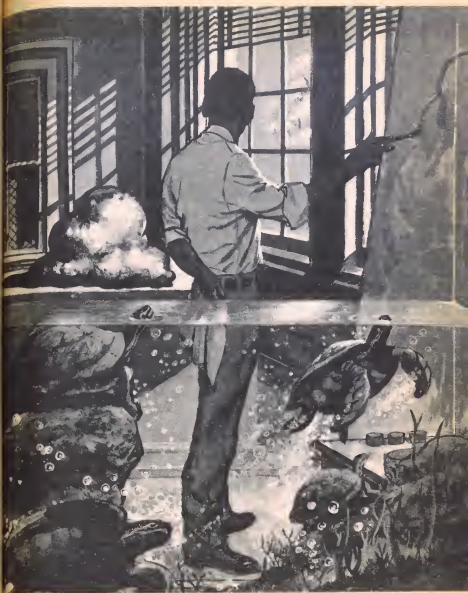
Later. This may be the end. The appeal court has given its decision. A blob may not own property in Florida. A blob is not a person.

Of course I am not a person, I never pretended to be. But I am a *personage*! I will yet fight this thing. . .

Later. I have lost everything. The last appeal is gone. By definition, I am an animal of indeterminate origin, and my property is being completely stripped from me.

I made an eloquent appeal and it moved them greatly. There were tears in their eyes. But there was greed in the set of their mouths. They have a vested interest in stripping me. Each will seize a little.

And I am left a pauper, a vassal, an animal, a slave. This is always the last doom of the marooned, to be a despised alien



at the mercy of a strange world.

Yet it should not be hopeless. I will have Margaret. Since my contract with Billy Wilkins and Blackjack Bracken, long since bought up, is no longer in effect, Margaret should be able to handle my affairs as a person. I believe that I have great earning powers yet, and I can win as much as I wish by gambling. We will treat this as only a technicality. We shall acquire new fortune. I will reestablish control over my environment. I will bring back the golden days. A few of my old friends are still loyal to me, Margaret, Pete the python, Eustace, . .

Later. The world has caved in completely. Margaret has thrown me over.

"I'm sorry, blobby," she said, "but it just won't work. You're still nice, but without money you are only a blob. How could I marry a blob?"

"But we can earn more money! I am talented."

"No, you're box-office poison now. You were a fad, and fads die quickly."

"But, Margaret, I can win as much as I wish by gambling."

"Not a chance, blobby. Nobody will gamble with you any more. You're through, blob. I will miss you, though. There will be a new blue note in my ballads when I sing for my supper, after

the mink coats are all gone. 'By now."

"Margaret, do not leave me! What of all our golden days together?"

But all she said was "'By now,' And she was gone forever.

I AM desolate and my old space-ineptitude has returned. My recovery was an illusion. I am so ill with awkwardness that I can no longer fly. I must walk on the ground like one of the giant grubs. A curse on this planet Florida and all its sister orbs! What a miserable world this is!

How could I have been tricked by a young Gamma type of the walking grub? Let her crawl back under her ancestral rocks with all the rest of her kind. . . No, no, I do not mean that. To me she will always remain a dream, a broken dream.

I am no longer welcome at the Casino. They kicked me down the front steps.

I no longer have a home at the Reptile Ranch.

"Mr. George Albert," said Eustace, "I just can't afford to be seen with you any more. I have my position to consider, with a sports car and all that."

And Pete the python was curt. "Well, big shot, I guess you aren't so big after all. And you were sure no friend of mine.

When you had that doctor cure me of my indigestion, you left me with nothing but my bad conscience. I wish I could get my indigestion back."

"A curse on this world," I said. "World, world, water, water, slug, slug," said the turtles in their tanks, my only friends.

So I have gone back into the woods to die. I have located my ejection mortar, and when I know that death is finally on me, I will fire off my communication sphere and hope it will reach

the galactic drift. Whoever finds it—friend—space traveler—you who were too impatient to remain on your own world—be you warned of this one! Here ingratitude is the rule and cruelty the main sport. The unfinished grubs have come out from under their rocks and they walk this world upside down with their heads in the air. Their friendship is fleeting, their promises are like the wind.

I am near my end.

—R. A. LAFFERTY

★ ★ ★ ★ ★ FORECAST

In the wide-open pages of a magazine the size of *Galaxy* (biggest in the field at any price, we like to keep reminding you) is room for many stories. This is a good thing, because we've got many stories (and fine ones) in the bank to draw on, and we're splurging them out to you as fast as we can. We don't know for sure everyone who will show up next issue. But we have in inventory first-rate yarns by Robert Bloch, Margaret St. Clair, J. F. Bone, R. A. Lafferty, Fritz Leiber, Miriam Allen deFord, Edward Wellen, Allen Kim Lang and Algis Budrys . . .

We do know that Jack Vance will be with us in August. This is a 1-o-n-g novelet called *THE*

MOON MOTH, with the sense of wonder and touch of strange that Vance knows how to give. Is the Moon Moth a person? No. Is it an animal? No. It's — well, read the story, and then you'll know better than we can say.

Also J. T. McIntosh is on the docket, with a fine, moving novelet about two men who had to be enemies but could not help being friends: *THE GATE-KEEPERS*. It's one of McIntosh's best — and that's very good indeed.

For the shorts we can promise you Lester del Rey and Judith Merril, and maybe a clutch from the illustrious lineup above . . . and the usual features, of course!



GALAXY'S 5 Star Shelf

The Vortex Blaster by E. E. Smith. Gnome Press.

"DOC" SMITH ruled the SF roost for a decade and a half during the years surrounding the Troubled Thirties. Each magazine installment of his *Skylark* and *Lensman* stories was breathlessly awaited by Space Opera addicts (and, in those days, who wasn't one?)

The *Vortex Blaster*, the latest of the Lensman sagas, is as tremendously broad in scope as its famous predecessors and, also

like them, on occasions painfully coy.

Synopsis: Atomic vortexes, raging areas of destruction, are blighting the surfaces of numerous planets. Inherently unstable, they must be quenched by an exactly calculated blast at a precise instant of time. Computers have been unable to supply data fast enough to do the job. Ergo, the *Vortex Blaster*, a mental freak with a combination of Univac and Superman condensed into the brain of one man. It is he who discovers the vast plot

against civilization masked by the immediate peril of the vortexes.

Plotwise composed of pure nostalgia, it is easy to see how the modern trend of SF has passed good Doc Smith by. But hang me for a Boskonian zwilnik and also by the great god Klono if I didn't get a huge bang out of his super-duper yarn.

Rating: (auld land syne) ****

Agent of Vega by James H. Schmitz. Gnome Press.

"SUPER-SCIENCE FICTION in the grand manner," brags the blurb in what turns out to be almost an understatement. This lineal descendant of the Doc Smith sagas fittingly follows the old master's latest and points up the "new look" of S. O.

This is Space Opera composed by a Space-Wagner, for a universe-wide stage and a chorus and orchestra of ET's. Three novelettes from *Astounding* and one from *Galaxy* present a picture of titanic conflict against ruthless enemies. Zone Agents — supermen and women of the Eliot Ness ilk — are forced to conduct their campaigns against evil on a sub-rosa level due to the restrictions of interstellar agreement and laissez-faire. However, their mental, physical and mechanical equipment are such that

it hardly remains a fair fight. The space ships of the agents themselves are telepathic and omnipotent. Even E. E. Smith never had it *that* good!

What places Schmitz's work above run of the mill S. O. is the quality as well as breadth of his imagination, but most of all his touch for characterization — which suffuses even his ET's and super-mechanisms with the (sometimes incongruous) flush of humanity.

Rating: ****½

A Guide to the Stars by Patrick Moore. W. W. Norton & Co., Inc.

IN CONTRAST to the views of a noted British professor of astronomy, Moore believes that popularizations excite interest so that the non-scientific layman can follow up his thirst for knowledge with more authoritative information. Moore does well by his audience.

Though his book contains "no new theories or world-shaking pronouncements," he writes with skill sufficient to engross even a merely superficially interested reader.

First Men to the Moon by Wernher von Braun. Holt, Rinehart and Winston, Inc.

VON BRAUN'S book is double-

barreled. The central core is a fictional story of the adventuresome voyage of the first two men to reach the moon. It is a highly detailed and absorbing blow-by-blow account of the 10-day argosy.

The secondary section of the book is a serious text explaining the technical points raised by the fiction, and is marginally placed on the identical pages so that reference can be immediate.

The illustrations are exceptional in lucidity, detail and abundance. Even the best grounded SF buff will find new and astonishing material over which to dream.

Conquest of Life by Adam Lukens. Avalon Books, N. Y. \$2.95

LUKENS SHOWED considerable originality in his first Avalon novel, *The Sea People*. Unfortunately that opus had little else to recommend it.

His present story concerns a future when Earthwomen, who outnumber males, are also murderously sadistic in their quest for entertainment. These delightful females purchase "reclaimed men", factory-rebuilt human robots fashioned from corpses, a la Frankenstein, as slave companions.

The story's prime mover is a former colonist of a distant star,

widowed on a primitive planet and unwilling inheritor of a reclaimed man. The yarn is concerned with her humanitarian attempt to eradicate the slave conditioning of the human robots.

Lukens's story is fast paced and cerebrally interesting but is plagued by an unfortunate inability to handle words.

Rating: **½

Star Surgeon by Alan E. Nourse, David McKay Co.

EARTH HAS been many things to many authors, but I believe that this is the first time that it has been the Hospital Center of the universe. Such a plot pivot is understandable, stemming from A. E. Nourse, M. D.

Dr. Nourse cuts a wide swath with his crusading pen: he attacks bigotry, nationalism and dependency with equal virulence. Bigotry he finds in the treatment of the only alien ever to attempt to earn his degree on Hospital Earth; nationalism in the desire of certain top officials to retain a monopoly of medical knowledge and skill for Earth alone; dependency of the alien on well-intentioned Terrans to an excessive degree, stultifying growth of character and self-reliance.

The story concerns the odyssey of the probationary three man crew of a General Practice patrol

ship to star systems covered by a sort of Blue Cross plan. The plot is predictable but credible, characterizations good, detail fine.

Rating: ****

The Challenge of the Sea by Arthur C. Clarke. Holt, Rinehart and Winston, Inc.

ARTHUR SEA CLARKE is back on the water wagon, interpreting the wet frontier in much the manner of his *Exploration of Space*. It is difficult to judge which of the two frontiers holds the greater attraction for him — or for us, for that matter. We are at the bare threshold of each and both hold mysteries and promises beyond our imagination.

More than just dealing with the obvious — we are rapidly depleting our land-based resources and must turn more and more to the sea for food, minerals and power — Clarke presents, a plethora of fascinating fact interspersed with conjecture.

Item: "Six miles down, air is squeezed denser than water. A bubble would not rise but sink."

Item: In 1900, Greek divers found bronze fragments that hid their secret for more than 50 years. They are parts of an elaborate calculating machine . . . a computer built before the time of Christ!

The Fantastic Universe Omnibus edited by Hans Stefan Santessen. Prentice-Hall, Inc.

ALTHOUGH *Fantastic Universe* has joined the too-lengthy list of defunct SF Mags, the above anthology helps to perpetuate its title. There are a round score of stories, diversified in plot, treatment and quality.

Among the best of the stories, *Bounty Hunter* by Avram Davidson, a shocker; *A Thing of Custom* by L. Sprague de Camp, a sprightly bit of froth about extraterrestrial VIP's on a Cook's Tour of Earth; and *Exile from Space*, a long novelette by Judith Merrill, stand out above the rest.

The remainder of the yarns are uneven enough to earn an overall.

Rating: ***½

Stadium Beyond the Stars by Milton Lesser. John C. Winston Co.

LESSER'S JUVENILE is a two-tone account in black and white of mankind's first interstellar Olympiad, twenty generations after colonization of Proxima Centauri.

Although melodramatic hogwash plotwise, the story contains enough action and originality for

Rating for youngsters: **½

—FLOYD C. GALE

They were the

strangest of pets . . .

and the

deadliest of enemies . . .

they were —

MOTHER HITTON'S LITTUL KITTONS

By CORDWAINER SMITH

Illustrated by FINLAY

Poor communications deter theft;
good communications promote theft;
perfect communications stop theft.

Van Braam

I

THE moon spun. The woman watched. Twenty-one facets had been polished at the moon's equator. Her function was to arm it. She was Mother Hitton, the Weapons Mistress of Old North Australia.

She was a ruddy-faced, cheerful blonde of indeterminate age. Her eyes were blue, her bosom heavy, her arms strong. She looked like a mother, but the only child she had ever had died many generations ago. Now she acted as mother to a planet, not to a person; the Norstrilians slept well because they knew she was watching. The weapons slept their long, sick sleep.



This night she glanced for the two-hundredth time at the warning bank. The bank was quiet. No danger lights shone. Yet she felt an enemy out somewhere in the universe—an enemy waiting to strike at her and her world, to snatch at the immeasurable wealth of the Norstrilians—and she snorted with impatience. *Come along, little man, she thought. Come along, little man, and die. Don't keep me waiting.*

She smiled when she recognized the absurdity of her own thought. She waited for him.

And he did not know it.

HE, the robber, was relaxed enough. He was Benjacomin Bozart, and was highly trained in the arts of relaxation.

No one at Sunvale, here on Ttiollé, could suspect that he was a Senior Warden of the Guild of Thieves, reared under the light of the starry-violet star. No one could smell the odor of Viola Siderea upon him. "Viola Siderea," the Lady Ru had said, "was once the most beautiful of worlds and it is now the most rotten. Its people were once models for mankind, and now they are thieves, liars and killers. You can smell their souls in the open day." The Lady Ru had died a long time ago. She was much respected, but she was wrong. The robber did not smell to others at all. He

knew it. He was no more "wrong" than a shark approaching a school of cod. Life's nature is to live, and he had been nurtured to live as he had to live—by seeking prey.

How else could he live? Viola Siderea had gone bankrupt a long time ago, when the photonic sails had disappeared from space and the planeforming ships began to whisper their way between the stars. His ancestors had been left to die on an off-trail planet. They refused to die. Their ecology shifted and they became predators upon man, adapted by time and genetics to their deadly tasks. And he, the robber, was champion of all his people—the best of their best.

He was Benjacomin Bozart.

He had sworn to rob Old North Australia or to die in the attempt, and he had no intention of dying.

The beach at Sunvale was warm and lovely. Ttiollé was a free and casual transit planet. His weapons were luck and himself: he planned to play both well.

The Norstrilians could kill.

So could he.

At this moment, in this place, he was a happy tourist at a lovely beach. Elsewhere, elsewhere, he could become a ferret among conies, a hawk among doves.

Benjacomin Bozart, Thief and Warden. He did not know that

someone was waiting for him. Someone who did not know his name was prepared to waken death, just for him. He was still serene.

Mother Hitton was not serene. She sensed him dimly but could not yet spot him.

One of her weapons snored. She turned it over.

A thousand stars away, Benjacomin Bozart smiled as he walked toward the beach.

II

BENJACOMIN felt like a tourist. His tanned face was tranquil. His proud, hooded eyes were calm. His handsome mouth, even without its charming smile, kept a suggestion of pleasantness at its corners. He looked attractive without seeming odd in the least. He looked much younger than he actually was. He walked with springy, happy steps along the beach of Sunvale.

The waves rolled in, white-crested, like the breakers of Mother Earth. The Sunvale people were proud of the way their world resembled Manhome itself. Few of them had even seen Manhome, but they had all heard a bit of history and most of them had a passing anxiety when they thought of the ancient government still wielding political power across the depth of space. They

did not like the old Instrumentality of Earth, but they respected and feared it. The waves might remind them of the pretty side of Earth; they did not want to remember the not-so-pretty side.

This man was like the pretty side of old Earth. They could not sense the power within him. The Sunvale people smiled absently at him as he walked past them along the shoreline.

The atmosphere was quiet and everything around him serene. He turned his face to the sun. He closed his eyes. He let the warm sunlight beat through his eyelids, illuminating him with its comfort and its reassuring touch.

Benjacomin dreamed of the greatest theft that any man had ever planned. He dreamed of stealing a huge load of the wealth from the richest world that mankind had ever built. He thought of what would happen when he would finally bring riches back to the planet of Viola Siderea where he had been reared. Benjacomin turned his face away from the sun and languidly looked over the other people on the beach.

There were no Norstrilians in sight yet. They were easy enough to recognize. Big people with red complexions; superb athletes and yet, in their own way, innocent, young and very tough. He had trained for this theft for two hundred years, his life prolonged for

the purpose by the Guild of Thieves on Viola Siderea. He himself embodied the dreams of his own planet, a poor planet once a crossroads of commerce, now sunken to being a minor outpost for spoliation and pilferage.

He saw a Norstrilian woman come out from the hotel and go down to the beach. He waited, and he looked, and he dreamed. He had a question to ask and no adult Australian would answer it.

"Funny," thought he, "that I call them 'Australians' even now. That's the old, old Earth name for them—rich, brave, tough people. Fighting children standing on half the world . . . and now they are the tyrants of all mankind. They hold the wealth. They have the santaclara, and other people live or die depending upon the commerce they have with the Norstrilians. But I won't. And my people won't. We're men who are wolves to Man."

BENJACOMIN waited gracefully. Tanned by the light of many suns, he looked forty though he was two hundred. He dressed casually, by the standards of a vacationer. He might have been an intercultural salesman, a senior gambler, an assistant starport manager. He might even have been a detective working along the commerce lanes. He wasn't. He was a thief. And he was so

good a thief that people turned to him and put their property in his hands because he was reassuring, calm, gray-eyed, blondhaired. Benjacomin waited. The woman glanced at him, a quick glance full of open suspicion.

What she saw must have calmed her. She went on past. She called back over the dune, "Come on, Johnny, we can swim out here." A little boy, who looked eight or ten years old, came over the dune top, running toward his mother.

Benjacomin tensed like a cobra. His eyes became sharp, his eyelids narrowed.

This was the prey. Not too young, not too old. If the victim had been too young he wouldn't know the answer; if the victim were too old it was no use taking him on. Norstrilians were famed in combat; adults were mentally and physically too strong to warrant attack.

Benjacomin knew that every thief who had approached the planet of the Norstrilians—who had tried to raid the dream world of Old North Australia—had gotten out of contact with his people and had died. There was no word of any of them.

And yet he knew that hundreds of thousands of Norstrilians must know *the* secret. They now and then made jokes about it. He had heard these jokes when he

was a young man, and now he was more than an old man without once coming near the answer. Life was expensive. He was well into his third lifetime and the lifetimes had been purchased honestly by his people. Good thieves all of them, paying out hard-stolen money to obtain the medicine to let their greatest thief remain living. Benjacomin didn't like violence. But when violence prepared the way to the greatest theft of all time, he was willing to use it.

The woman looked at him again. The mask of evil which had flashed across his face faded into benignity; he calmed. She caught him in that moment of relaxation. She liked him.

She smiled and, with that awkward hesitation so characteristic of the Norstrilians, she said, "Could you mind my boy a bit while I go in the water? I think we've seen each other here at the hotel."

"I don't mind," said he. "I'd be glad to. Come here, son."

Johnny walked across the sunlight dunes to his own death. He came within reach of his mother's enemy.

But the mother had already turned.

THE trained hand of Benjacomin Bozart reached out. He seized the child by the shoulder.

He turned the boy toward him, forcing him down. Before the child could cry out, Benjamin had the needle into him with the truth drug.

All Johnny reacted to was pain, and then a hammerblow inside his own skull as the powerful drug took force.

Benjacomin looked out over the water. The mother was swimming. She seemed to be looking back at them. She was obviously unworried. To her, the child seemed to be looking at something the stranger was showing him in a relaxed, easy way.

"Now, sonny," said Benjacomin, "tell me, what's the outside defense?"

The boy didn't answer.

"What is the outer defense, sonny? What is the outer defense?" repeated Benjacomin. The boy still didn't answer.

Something close to horror ran over the skin of Benjacomin Bozart as he realized that he had gambled his safety on this planet, gambled the plans themselves for a chance to break the secret of the Norstrilians.

He had been stopped by simple, easy devices. The child had already been conditioned against attack. Any attempt to force knowledge out of the child brought on a conditioned reflex of total muteness. The boy was literally unable to talk.

Sunlight gleaming on her wet hair, the mother turned around and called back, "Are you all right, Johnny?"

Benjacomin waved to her instead. "I'm showing him my pictures, ma'am. He likes 'em. Take your time." The mother hesitated and then turned back to the water and swam slowly away.

Johnny, taken by the drug, sat lightly, like an invalid, on Benjacomin's lap.

Benjacomin said, "Johnny, you're going to die now and you will hurt terribly if you don't tell me what I want to know." The boy struggled weakly against his grasp. Benjacomin repeated, "I'm going to hurt you if you don't tell me what I want to know. What are the outer defenses? What are the outer defenses?"

The child struggled and Benjacomin realized that the boy was putting up a fight to comply with the orders, not a fight to get away. He let the child slip through his hands and the boy put out a finger and began writing on the wet sand. The letters stood out.

A man's shadow loomed behind them.

Benjacomin, alert, ready to spin, kill or run, slipped to the ground beside the child and said, "That's a jolly puzzle. That is a good one. Show me some more." He smiled up at the passing adult.

The man was a stranger. The stranger gave him a very curious glance which became casual when he saw the pleasant face of Benjacomin, so tenderly and so agreeably playing with the child.

The fingers were still making the letters in the sand.

There stood the riddle in letters: **MOTHER HITTON'S LIT-TUL KITTONS.**

THE woman was coming back from the sea, the mother with questions. Benjacomin stroked the sleeve of his coat and brought out his second needle, a shallow poison which it would take days or weeks of laboratory work to detect. He thrust it directly into the boy's brain, slipping the needle up behind the skin at the edge of the hairline. The hair shadowed the tiny prick. The incredibly hard needle slipped under the edge of the skull. The child was dead.

Murder accomplished, Benjacomin casually erased the secret from the sand. The woman came nearer. He called to her, his voice full of pleasant concern, "Ma'am, you'd better come here, I think your son has fainted from the heat."

He gave the mother the body of her son. Her face changed to alarm. She looked frightened and alert. She didn't know how to meet this.

For a dreadful moment she looked into his eyes.

Two hundred years of training took effect . . . She saw nothing. The murderer did not shine with murder. The hawk was hidden beneath the dove. The heart was masked by the trained face.

Benjamin relaxed in professional assurance. He had been prepared to kill her too, although he was not sure that he could kill an adult, female Norstrilian. Very helpfully said he, "You stay here with him. I'll run to the hotel and get help. I'll hurry."

He turned and ran. A beach attendant saw him and ran toward him. "The child's sick," he shouted. He came to the mother in time to see blunt, puzzled tragedy on her face and with it, something more than tragedy: doubt.

"He's not sick," said she. "He's dead."

"He can't be." Benjamin looked attentive. He felt attentive. He forced the sympathy to pour out of his posture, out of all the little muscles of his face. "He can't be. I was talking to him just a minute ago. We were doing little puzzles in the sand."

The mother spoke with a hollow, broken voice that sounded as though it would never find the right chords for human speech again, but would go on forever with the ill-attuned flats of un-

expected grief. "He's dead," she said. "You saw him die and I guess I saw him die, too. I can't tell what's happened. The child was full of *santaclara*. He had a thousand years to live but now he's dead. What's your name?"

Benjamin said, "Eldon. Eldon the salesman, ma'am. I live here lots of times."

III

"MOTHER Hitton's littul kittons. Mother Hitton's littul kittons."

The silly phrase ran in his mind. Who was Mother Hitton? What was she the mother of? What were *kittons*? Were they a misspelling for "kittens?" Little cats? Or were they something else?

Had he killed a fool to get a fool's answer?

How many more days did he have to stay there with the doubtful, staggered woman? How many days did he have to watch and wait? He wanted to get back to Viola Siderea; to take the secret, bad as it was, for his people to study. Who was Mother Hitton?

He forced himself out of his room and went downstairs.

The pleasant monotony of a big hotel was such that the other guests looked interestedly at him. He was the man who had watched

while the child died on the beach.

Some lobby-living scandal-mongers that stayed there had made up fantastic stories that he had killed the child. Others attacked the stories, saying they knew perfectly well who Eldon was. He was Eldon the salesman. It was ridiculous.

People hadn't changed much, even though the ships with the Go-Captains sitting at their hearts whispered between the stars, even though people shuffled between worlds—when they had the money to pay their passage back and forth—like leaves falling in soft, playful winds. Benjamin faced a tragic dilemma. He knew very well that any attempt to decode the answer would run directly into the protective devices set up by the Norstrilians.

Old North Australia was immensely wealthy. It was known the length and breadth of all the stars that they had hired mercenaries, defensive spies, hidden agents and alerting devices.

Even Manhome — Mother Earth herself, whom no money could buy — was bribed by the drug of life. An ounce of the *santaclara* drug, reduced, crystallized and called "stroon," could give forty to sixty years of life. Stroon entered the rest of the Earth by ounces and pounds, but it was refined back on Old North Australia by the ton. With treas-

ure like this, the Norstrilians owned an unimaginable world whose resources overreached all conceivable limits of money. They could buy anything. They could pay with other peoples' lives.

For hundreds of years they had given secret funds to buying foreigners' services to safeguard their own security.

Benjamin stood there in the lobby: "Mother Hitton's littul kittons."

He had all the wisdom and wealth of a thousand worlds stuck in his mind but he didn't dare ask anywhere as to what it meant.

Suddenly he brightened.

HE looked like a man who had thought of a good game to play, a pleasant diversion to be welcomed, a companion to be remembered, a new food to be tasted. He had had a very happy thought.

There was one source that wouldn't talk. The library. He could at least check the obvious, simple things, and find out what there was already in the realm of public knowledge concerning the secret he had taken from the dying boy.

His own safety had not been wasted, Johnny's life had not been thrown away, if he could find any one of the four words as a key. *Mother* or *Hitton* or *Littul*, in its special meaning, or *Kittun*.

He might yet break through to the loot of Norstrilia.

He swung jubilantly, turning on the ball of his right foot. He moved lightly and pleasantly toward the billiard room, beyond which lay the library. He went in.

This was a very expensive hotel and very old-fashioned. It even had books made out of paper, with genuine bindings. Benjacomin crossed the room. He saw that they had the *Galactic Encyclopedia* in two hundred volumes. He took down the volume headed "Hi-Hi." He opened it from the rear, looking for the name "Hitton" and there it was. "Hitton, Benjamin—pioneer of old North Australia. Said to be originator of part of the defense system. Lived A.D. 10719-17213." That was all. Benjacomin moved among the books. The word "kittons" in that peculiar spelling did not occur anywhere, neither in the encyclopedia nor in any other list maintained by the library. He walked out and upstairs, back to his room.

"Littul" had not appeared at all. It was probably the boy's own childish mistake.

He took a chance. The mother, half blind with bewilderment and worry, sat in a stiff-backed chair on the edge of the porch. The other women talked to her. They knew her husband was coming. Benjacomin went up to her and

tried to pay his respects. She didn't see him.

"I'm leaving now, ma'am. I'm going on to the next planet, but I'll be back in two or three subjective weeks. And if you need me for urgent questions, I'll leave my addresses with the police here."

BENJACOMIN left the weeping mother.

Benjacomin left the quiet hotel. He obtained a priority passage.

The easy-going Sunvale Police made no resistance to his demand for a sudden departure visa. After all, he had an identity, he had his own funds, and it was not the custom of Sunvale to contradict its guests. Benjacomin went on the ship and as he moved toward the cabin in which he could rest for a few hours, a man stepped up beside him. A youngish man, hair parted in the middle, short of stature, gray of eyes.

This man was the local agent of the Norstrilian secret police.

Benjacomin, trained thief that he was, did not recognize the policeman. It never occurred to him that the library itself had been attuned and that the word "kittons" in the peculiar Norstrilian spelling was itself an alert. Looking for that spelling had set off a minor alarm. He had touched the trip-wire.

The stranger nodded. Benja-

comin nodded back. "I'm a traveling man, waiting over between assignments. I haven't been doing very well. How are you making out?"

"Doesn't matter to me. I don't earn money; I'm a technician. Liverant is the name."

Benjacomin sized him up. The man was a technician all right. They shook hands perfunctorily. Liverant said, "I'll join you in the bar a little later. I think I'll rest a bit first."

They both lay down then and said very little while the momentary flash of planoform went through the ship. The flash passed. From books and lessons they knew that the ship was leaping forward in two dimensions while, somehow or other, the fury of space itself was fed into the computers—and that these in turn were managed by the Go-Captain who controlled the ship.

They knew these things but they could not feel them. All they felt was the sting of a slight pain.

The sedative was in the air itself, sprayed in the ventilating system. They both expected to become a little drunk.

THE thief Benjacomin Bozart was trained to resist intoxication and bewilderment. Any sign whatever that a telepath had tried to read his mind would have been met with fierce animal

resistance, implanted in his unconscious during early years of training. Bozart was not trained against deception by a technician; it never occurred to the Thieves' Guild back on Viola Siderea that it would be necessary for their own people to resist deceivers. Liverant had already been in touch with Norstrilia—Norstrilia whose money reached across the stars, Norstrilia who had alerted a hundred thousand worlds against the mere thought of trespass.

Liverant began to chatter. "I wish I could go further than this trip. I wish that I could go to Olympia. You can buy anything in Olympia."

"I've heard of it," said Bozart. "It's sort of a funny trading planet with not much chance for businessmen, is it?"

Liverant laughed and his laughter was merry and genuine. "Trading? They don't trade. They swap. They take all the stolen loot of a thousand worlds and sell it over again and they change and they paint it and they mark it. That's their business there. The people are blind. It's a strange world, and all you have to do is to go in there and you can have anything you want. Man," said Liverant, "what I could do in a year in that place! Everybody is blind except me and a couple of tourists. And there's all the wealth

that everybody thought he's mislaid, half the wrecked ships, the forgotten colonies (they've all been cleaned out), and bang! it all goes to Olympia."

Olympia wasn't really that good and Liverant didn't know why it was his business to guide the killer there. All he knew was that he had a duty and the duty was to direct the trespasser.

Many years before either man was born the code word had been planted in directories, in books, in packing cases and invoices. *Kittons* misspelled. This was the cover name for the outer moon of Norstrilian defense. The use of the cover name brought a raging alert ready into action, with systemic nerves as hot and quick as incandescent tungsten wire.

By the time that they were ready to go to the bar and have refreshments, Benjacomin had half forgotten that it was his new acquaintance who had suggested Olympia rather than another place. He had to go to Viola Siderea to get the credits to make the flight to take the wealth, to win the world of Olympia.

IV

AT home on his native planet Bozart was a subject of a gentle but very sincere celebration.

The Elders of the Guild of Thieves welcomed him. They congratulated him. "Who else could have done what you've done, boy? You've made the opening move in a brand new game of chess. There has never been a gambit like this before. We have a name; we have an animal. We'll try it right here!" The Thieves' Council turned to their own encyclopedia. They turned through the name "Hitton" and then found the reference "kitton." None of them knew that a false lead had been planted there—by an agent in their world.

The agent, in his turn, had been seduced years before, debauched in the middle of his career, forced into temporary honesty, blackmailed and sent home. In all the years that he had waited for a dreaded countersign—a countersign which he himself never knew to be an extension of Norstrilian intelligence—he never dreamed that he could pay his debt to the outside world so simply. All they had done was to send him one page to add to the encyclopedia. He added it and then went home, weak with exhaustion. The years of fear and waiting were almost too much for the thief. He drank heavily for fear that he might otherwise kill himself. Meanwhile, the pages remained in order, including the new one, slightly altered for his

colleagues. The encyclopedia indicated the change like any normal revision, though the whole entry was new and falsified:

Beneath this passage one revision ready. Dated 24th year of second issue.

The reported "Kittons" of Norstrilia are nothing more than the use of organic means to induce the disease in Earth-mutated sheep which produces a virus in its turn, as refinable as the sanctalara drug. The term "Kittons" enjoyed a temporary vogue as a reference term both to the disease and to the destructibility of the disease in the event of external attack. This is believed to have been connected with the career of Benjamin Hitton, one of the original pioneers of Norstrilia.

The Council of Thieves read it and the Chairman of the council said "I've got your papers ready. You can go try them now. Where do you want to go? Through Neuhamburg?"

"No," said Benjacomin. "I thought I'd try Olympia."

"Olympia's all right," said the chairman. "Go easy. There's only one chance in a thousand you'll fail. But if you do, we might have to pay for it."

He smiled wryly and handed Benjacomin a blank mortgage against all the labor and all the property of Viola Siderea.

The Chairman laughed with a sort of snort. "It'd be pretty rough on us if you had to borrow enough on the trading planet to force us to become honest—and then lost out anyhow."

"No fear," said Benjacomin. "I can cover that."

THERE are some worlds where all dreams die, but square-clouded Olympia is not one of them. The eyes of men and women are bright on Olympia, for they see nothing.

"Brightness was the color of pain," said Nachtigall, "when we could see. If thine eye offend thee, pluck thyself out, for the fault lies not in the eye but in the soul."

Such talk was common in Olympia, where the settlers went blind a long time ago and now think themselves superior to sighted people. Radar wires tickle their living brains; they can perceive radiation as well as can an animal-type man with little aquariums hung in the middle of his face. Their pictures are sharp, and they demand sharpness. Their buildings soar at impossible angles. Their blind children sing songs as the tailored climate proceeds according to the num-

bers, geometrical as a kaleidoscope.

There went the man, Bozart himself. Among the blind his dreams soared, and he paid money for information which no living person had ever seen.

Sharp-clouded and aqua-skied, Olympia swam past him like another man's dream. He did not mean to tarry there, because he had a rendezvous with death in the sticky, sparky space around Norstrilia.

ONCE in Olympia, Benjacomin went about his arrangements for the attack on Old North Australia. On his second day on the planet he had been very lucky. He met a man named Lavender and he was sure he had heard the name before. Not a member of his own Guild of Thieves, but a daring rascal with a bad reputation among the stars.

It was no wonder that he had found Lavender. His pillow had told him Lavender's story fifteen times during his sleep in the past week. And, whenever he dreamed, he dreamed dreams which had been planted in his mind by the Norstrilian counterintelligence. They had beaten him in getting to Olympia first and they were prepared to let him have only that which he deserved. The Norstrilian Police were not cruel, but they were out to defend their

world. And they were also out to avenge the murder of a child.

The last interview which Benjacomin had with Lavender in striking a bargain before Lavender agreed was a dramatic one.

Lavender refused to move forward.

"I'm not going to jump off anywhere. I'm not going to raid anything, I'm not going to steal anything. I've been rough, of course I have. But I don't get myself killed and that's what you're bloody well asking for."

"Think of what we'll have. The wealth. I tell you, there's more money here than anything else anybody's ever tried."

Lavender laughed. "You think I haven't heard that before? You're a crook and I'm a crook. I don't go anything that's on speculation. I want my hard cash down. I'm a fighting man and you're a thief and I'm not going to ask you what you're up to . . . but I want my money first."

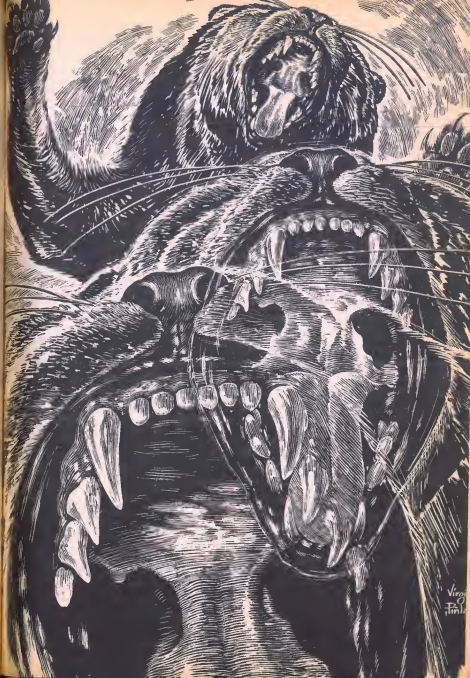
"I haven't got it," said Benjacomin.

Lavender stood up.

"Then you shouldn't have talked to me. Because it's going to cost you money to keep me quiet whether you hire me or not."

The bargaining process started.

Lavender looked ugly indeed. He was a soft, ordinary man who had gone to a lot of trouble to



become evil. Sin is a lot of work. The sheer effort it requires often shows in the human face.

Bozart stared him down, smiling easily, not even contemptuously.

"Cover me while I get something from my pocket," said Bozart.

Lavender did not even acknowledge the comment. He did not show a weapon. His left thumb moved slowly across the outer edge of his hand. Benjacomin recognized the sign, but did not flinch.

"See," he said. "A planetary credit."

Lavender laughed. "I've heard that, too."

"Take it," said Bozart.

The adventurer took the laminated card. His eyes widened. "It's real," he breathed. "It is real." He looked up, incalculably more friendly. "I never even saw one of these before. What are your terms?"

Meanwhile the bright, vivid Olympians walked back and forth past them, their clothing all white and black in dramatic contrast. Unbelievable geometric designs shone on their cloaks and their hats. The two bargainiers ignored the natives. They concentrated on their own negotiations.

Benjacomin felt fairly safe. He placed a pledge of one year's service of the entire planet of Viola

Siderea in exchange for the full and unqualified services of Captain Lavender, once of the Imperial Marines Internal Space Patrol. He handed over the mortgage. The year's guarantee was written in. Even on Olympia there were accounting machines which relayed the bargain back to Earth itself, making the mortgage a valid and binding commitment against the whole planet of thieves.

"This," thought Lavender, "was the first step of revenge." After the killer had disappeared his people would have to pay with sheer honesty. Lavender looked at Benjacomin with a clinical sort of concern.

Benjacomin mistook his look for friendliness and Benjacomin smiled his slow, charming, easy smile. Momentarily happy, he reached out his right hand to give Lavender a brotherly solemnification of the bargain. The men shook hands, and Bozart never knew with what he shook hands.

V

"GRAY lay the land oh. Gray grass from sky to sky. Not near the weir, dear. Not a mountain, low or high—only hills and gray gray. Watch the dappled, dimpled twinkles blooming on the star bar.

"That is Norstrilia.

"All the muddy gubbery is gone—all the work and the waiting and the pain.

"Beige-brown sheep lie on blue-gray grass while the clouds rush past, low overhead, like iron pipes ceilinging the world.

"Take your pick of sick sheep, man, it's the sick that pays. Sneeze me a planet, man, or cough me up a spot of immortality. If it's barmy there, where the noddies and the trolls like you live, it's too right here.

"That's the book, boy.

"If you haven't seen Norstrilia, you haven't seen it. If you did see it, you wouldn't believe it.

"Charts call it Old North Australia."

HERE in the heart of the world was the farm which guarded the world. This was the Hitton place.

Towers surrounded it and wires hung between the towers, some of them drooping crazily and some gleaming with the sheen not shown by any other metal made by men from Earth. Within the towers there was open land. And within the open land there were twelve thousand hectares of concrete. Radar reached down to within millimeter smoothness of the surface of the concrete and the other radar threw patterns back and forth, down through molecular thinness. The farm

went on. In its center there was a group of buildings. That was where Katherine Hitton worked on the task which her family had accepted for the defense of her world.

No germ came in, no germ went out. All the food came in by space transmitter. Within this, there lived animals. The animals depended on her alone. Were she to die suddenly, by mischance or as a result of an attack by one of the animals, the authorities of her world had complete facsimiles of herself with which to train new animal tenders under hypnosis.

This was a place where the gray wind leapt forward released from the hills, where it raced across the gray concrete, where it blew past the radar towers. The polished, faceted, captive moon always hung due overhead. The wind hit the buildings, themselves gray, with the impact of a blow, before it raced over the open concrete beyond and whistled away into the hills.

Outside the buildings, the valley had not needed much camouflage. It looked like the rest of Norstrilia. The concrete itself was tinted very slightly to give the impression of poor, starved, natural soil. This was the farm, and this the woman. Together they were the outer defense of the richest world mankind had ever built.

Katherine Hitton looked out the window and thought to herself, "Forty-two days before I go to market and it's a welcome day that I get there and hear the jig of a music.

"Oh, to walk on market day,
"And see my people proud and gay!"

She breathed deeply of the air. She loved the gray hills—though in her youth she had seen many other worlds. And then she turned back into the building to the animals and the duties which awaited her. She was the only Mother Hitton and these were her littul kittons.

SHE moved among them. She and her father had bred them from Earth mink, from the fiercest, smallest, craziest little minks that had ever been shipped out from Manhome. Out of these minks they had made their lives to keep away other predators who might bother the sheep, on whom the stroon grew. But these minks were born mad.

Generations of them had been bred psychotic to the bone. They lived only to die and they died so that they could stay alive. These were the kittons of Norstrilia. Animals in whom fear, rage, hunger and sex were utterly intermixed; who could eat themselves or each other; who could

eat their young, or people, or anything organic; animals who screamed with murder-lust when they felt love; animals born to loathe themselves with a fierce and livid hate and who survived only because their waking moments were spent on couches, strapped tight, claw by claw, so that they could not hurt each other or themselves. Mother Hitton let them waken only a few moments in each lifetime. They bred and killed. She wakened them only two at a time.

All that afternoon she moved from cage to cage. The sleeping animals slept well. The nourishment ran into their blood streams; they lived sometimes for years without awaking. She bred them when the males were only partly awakened and the females aroused only enough to accept her veterinary treatments. She herself had to pluck the young away from their mothers as the sleeping mothers begot them. Then she nourished the young through a few happy weeks of kittonhood, until their adult natures began to take, their eyes ran red with madness and heat and their emotions sounded in the sharp, hideous, little cries they uttered through the building; and the twisting of their neat, furry faces, the rolling of their crazy, bright eyes and the tightening of their sharp, sharp claws.

She woke none of them this time. Instead, she tightened them in their straps. She removed the nutrients. She gave them delayed stimulus medicine which would, when they were awakened, bring them suddenly full waking with no lulled stupor first.

Finally, she gave herself a heavy sedative, leaned back in a chair and waited for the call which would come.

WHEN the shock came and the call came through, she would have to do what she had done thousands of times before.

She would ring an intolerable noise through the whole laboratory.

Hundreds of the mutated minks would awaken. In awakening, they would plunge into life with hunger, with hate, with rage and with sex; plunge against their straps; strive to kill each other, their young, themselves, her. They would fight everything and everywhere, and do everything they could to keep going.

She knew this.

In the middle of the room there was a tuner. The tuner was a direct, empathic relay, capable of picking up the simpler range of telepathic communications. Into this tuner went the concentrated emotions of Mother Hitton's littul kittons.

The rage, the hate, the hunger,

the sex were all carried far beyond the limits of the tolerable, and then all were thereupon amplified. And then the waveband on which this telepathic control went out was amplified, right there beyond the studio, on the high towers that swept the mountain ridge, up and beyond the valley in which the laboratory lay. And Mother Hitton's moon, spinning geometrically, bounced the relay into a hollow englobement.

From the faceted moon, it went to the satellites—sixteen of them, apparently part of the weather control system. These blanketed not only space, but nearby subspace. The Norstrilians had thought of everything.

The short shocks of an alert came from Mother Hitton's transmitter bank.

A call came. Her thumb went numb.

The noise shrieked.

The mink awakened.

Immediately, the room was full of chattering, scraping, hissing, growling and howling.

Under the sound of the animal voices, there was the other sound: a scratchy, snapping sound like hail falling on a frozen lake. It was the individual claws of hundreds of mink trying to tear their way through metal panels.

Mother Hitton heard a gurgle. One of the minks had succeeded

in tearing its paw loose and had obviously started to work on its own throat. She recognized the tearing of fur, the ripping of veins.

She listened for the cessation of that individual voice, but she couldn't be sure. The others were making too much noise. One mink less.

Where she sat, she was partly shielded from the telepathic relay, but not altogether. She herself, old as she was, felt queer wild dreams go through her. She thrilled with hate as she thought of beings suffering out beyond her—suffering terribly, since they were not masked by the built-in defenses of the Norstrilian communications system.

She felt the wild throb of long-forgotten lust.

She hungered for things she had not known she remembered. She went through the spasms of fear that the hundreds of animals expressed.

Underneath this, her sane mind kept asking, "How much longer can I take it? How much longer must I take it? Lord God, be good to your people here on this world! Be good to poor old me."

The green light went on.

She pressed a button on the other side of her chair. The gas hissed in. An she passed into unconsciousness, she knew that her

kittons passed into instant unconsciousness too.

She would waken before they did and then her duties would begin: checking the living ones, taking out the one that had clawed out its own throat, taking out those who had died of heart attacks, re-arranging them, dressing their wounds, treating them alive and asleep — asleep and happy — breeding, living in their sleep — until the next call should come to waken them for the defense of the treasures which blessed and cursed her native world.

VI

EVERYTHING had gone exactly right. Lavender had found an illegal planoform ship. This was no unsequential accomplishment, since planoform ships were very strictly licensed and obtaining an illegal one was a chore on which a planet full of crooks could easily have worked a lifetime.

Lavender had been lavished with money — Benjacomin's money.

The honest wealth of the thieves' planet had gone in and had paid the falsifications and great debts, imaginary transactions that were fed to the computers for ships and cargoes and passengers that would be

almost untraceably commingled in the commerce of 10,000 worlds.

"Let him pay for it," said Lavender, to one of his confederates, an apparent criminal who was also a Norstrilian agent. "This is paying good money for bad. You better spend a lot of it."

Just before Benjacomin took off Lavender sent on an additional message.

He sent it directly through the Go-Captain, who usually did not carry messages. The Go-Captain was a relay commander of the Norstrilian fleet, but he had been carefully ordered not to look like it.

The message concerned the planoform license — another twenty-odd tablets of stroom which could mortgage Viola Siderea for hundreds upon hundreds of years. The Captain said: "I don't have to send that through. The answer is yes."

Benjacomin came into the control room. This was contrary to regulations, but he had hired the ship to violate regulations.

The Captain looked at him sharply. "You're a passenger, get out."

Benjacomin said: "You have my little yacht on board. I am the only man here outside of your people."

"Get out. There's a fine if you're caught here."

"It does not matter," Benjacomin said. "I'll pay it."

"You will, will you?" said the Captain. "You would not be paying twenty tablets of stroom. That's ridiculous. Nobody could get that much stroom."

Benjacomin laughed, thinking of the thousands of tablets he would soon have. All he had to do was to leave the planoform ship behind, strike once, go past the kittons and come back.

His power and his wealth came from the fact that he knew he could now reach it. The mortgage of twenty tablets of stroom against this planet was a low price to pay if it would pay off at thousands to one. The Captain replied: "It's not worth it, it just is not worth risking twenty tablets for your being here. But I can tell you how to get inside the Norstrilian communications net if that is worth twenty-seven tablets."

Benjacomin went tense.

FOR a moment he thought he might die. All this work, all this training — the dead boy on the beach, the gamble with the credit, and now this unsuspected antagonist!

He decided to face it out. "What do you know?" said Benjacomin.

"Nothing," said the Captain.

"You said 'Norstrilia.'"

"That I did," said the Captain. "If you said Norstrilia, you must have guessed it. Who told you?"

"Where else would a man go if you look for infinite riches? If you get away with it. Twenty tablets is nothing to a man like you."

"It's two hundred years' worth of work from three hundred thousand people," said Benjacomin grimly.

"When you get away with it, you will have more than twenty tablets, and so will your people."

And Benjacomin thought of the thousands and thousands of tablets. "Yes, that I know."

"If you don't get away with it, you've got the card."

"That's right. All right. Get me inside the net. I'll pay the twenty-seven tablets."

"Give me the card."

Benjacomin refused. He was a trained thief, and he was alert to thievery. Then he thought again. This was the crisis of his life. He had to gamble a little on somebody.

He had to wager the card. "I'll mark it and then I'll give it back to you." Such was his excitement that Benjacomin did not notice that the card went into a duplicator, that the transaction was recorded, that the message went back to Olympic Center, that the loss and the mortgage against the

planet of Viola Siderea should be credited to certain commercial agencies in Earth for three hundred years to come.

Benjacomin got the card back. He felt like an honest thief.

If he did die, the card would be lost and his people would not have to pay. If he won, he could pay that little bit out of his own pocket.

Benjacomin sat down. The Go-Captain signalled to his pin-lighters. The ship lurched.

FOR half a subjective hour they moved, the Captain wearing a helmet of space upon his head, sensing and grasping and guessing his way, stepping to stepping stone, right back to his home. He had to fumble the passage, or else Benjacomin might guess that he was in the hands of double agents.

But the Captain was well trained. Just as well trained as Benjacomin.

Agents and thieves, they rode together.

They planofirmed inside the communications net. Benjacomin shook hands with them. "You are allowed to materialize as soon as I call."

"Good luck, sir," said the Captain.

"Good luck to me," said Benjacomin.

He climbed into his space

yacht. For less than a second in real space, the gray expanse of Norstrilia loomed up. The ship which looked like a simple warehouse disappeared into planoform, and the yacht was on its own.

The yacht dropped.

As it dropped, Benjacomin had a hideous moment of confusion and terror.

He never knew the woman down below but she sensed him plainly as he received the wrath of the much-amplified kittons. His conscious mind quivered under the blow. With a prolongation of subjective experience which made one or two seconds seem like months of hurt drunken bewilderment, Benjacomin Bozart swept beneath the tide of his own personality. The moon relay threw minkish minds against him. The synapses of his brain re-formed to conjure up might-have-beens, terrible things that never happened to any man. Then his knowing mind whitened out in an overload of stress.

His subcortical personality lived on a little longer.

His body fought for several minutes. Mad with lust and hunger, the body arched in the pilot's seat, the mouth bit deep into his own arm. Driven by lust, the left hand tore at his face, ripping out his left eye ball. He screeched with animal lust as he tried to

devour himself . . . not entirely without success.

The overwhelming telepathic message of Mother Hitton's Littul Kittons ground into his brain.

The mutated minks were fully awake.

The relay satellites had poisoned all the space around him with the craziness to which the minks were bred.

Bozart's body did not live long. After a few minutes, the arteries were open, the head slumped forward and the yacht was dropping helplessly toward the warehouses which it had meant to raid. Norstrilian police picked it up.

The police themselves were ill. All of them were ill. All of them were white-faced. Some of them had vomited. They had gone through the edge of the mink defense. They had passed through the telepathic band at its thinnest and weakest point. This was enough to hurt them badly.

They did not want to know.

They wanted to forget.

One of the younger policemen looked at the body and said, "What on earth could do that to a man?"

"He picked the wrong job," said the police captain.

The young policeman said: "What's the wrong job?"

"The wrong job is trying to rob us, boy. We are defended, and we don't want to know how."

The young policeman, humiliated and on the verge of anger, looked almost as if he would defy his superior, while keeping his eyes away from the body of Benjamen Bozart.

The older man said: "It's all right. He did not take long to die and this is the man who killed the boy Johnny, not very long ago."

BACK ISSUES!

Those back issues you need are probably listed in the 1st BIG issue of "The SATA Trader." An initial monthly circulation of 3,000 active collectors or a refund given. 5 issues for \$1, 10 issues for \$2. FREE! A 50 word AD (\$1 value) with a 10 issue subscription. Use a fairly new BLACK typewriter ribbon and type the AD in the form of a rectangle, 5 lines deep by 41 Pica or 50 Elite spaces wide. Charter Subscribers will receive 1 FREE issue with every 5 purchased at the regular price. YOUR support NOW will make it possible to serve you BETTER in the FUTURE. Send \$1 for samples of today's 3 BEST lithographed fanzines. Send your unwanted S-F to be distributed to fans overseas.

"The SATA Trader," Dept. 9
P.O. Box 400, Los Alamos, N. Mex.

"Oh, him? So soon?"
"We brought him." The old police officer nodded. "We let him find his death. That's how we live. Tough, isn't it?"

THE ventilators whispered softly, gently. The animals slept again. A jet of air poured down on Mother Hitton. The telepathic relay was still on. She could feel herself, the sheds, the faceted moon, the little satellites. Of the robber there was no sign.

She stumbled to her feet. Her raiment was moist with perspiration. She needed a shower and fresh clothes . . .

Back at Manhome, the Commercial Credit Circuit called shrilly for human attention. A junior subchief of the Instrumentality walked over to the machine and held out his hand.

The machine dropped a card neatly into his fingers.

He looked at the card.

"Debit Viola Siderea — credit Earth Contingency — subcredit Norstrilian account — four hundred million man megayears."

Though all alone, he whistled to himself in the empty room. "We'll all be dead, stroon or no stroon, before they finish paying that!" He went off to tell his friends the odd news.

The machine, not getting its card back, made another one.

— CORDWAINER SMITH

HOW ARE YOU GOING TO KEEP THEM DOWN ON THE FARM - AFTER THEY'VE SEEN THE TRUTH?



BREAKDOWN

By HERBERT D. KASTLE
Illustrated by COWLES

HE didn't know exactly when it had started, but it had been going on for weeks. Edna begged him to see the doctor living in that new house two miles past Dugan's farm, but he refused. He point-blank refused to admit he was sick *that* way — in the head!

Of course, a man could grow forgetful. He had to admit there were moments when he had all sorts of mixed-up memories and thoughts in his mind. And sometimes — like right now, lying in bed beside Edna, watching the first hint of light touch the windows — he began sweating with fear. A horrible, gut-wrenching fear, all the more horrible because it was based on nothing.

The chicken-run came alive; the barn followed minutes later. There were chores to do, the same chores he'd done all his forty-one years. Except that now, with the new regulations about wheat and corn, he had only a vegetable patch to farm. Sure, he got paid for letting the fields remain empty. But it just didn't seem right, all that land going to waste. . .

Davie. Blond hair and a round, tanned face and strong arms growing stronger each day from helping out after school.

He turned and shook Edna. "What happened to Davie?"

She cleared her throat,

mumbled, "Huh? What happened to who?"

"I said, what . . ." But then it slipped away. Davie? No, that was part of a dream he'd had last week. He and Edna had no children.

He felt the fear again, and got up fast to escape it. Edna opened her eyes as soon as his weight left the bed. "Like hotcakes for breakfast?"

"Eggs," he said. "Bacon." And then, seeing her face change, he remembered. "Course," he muttered. "Can't have bacon. Rationed."

She was fully awake now. "If you'd only go see Dr. Hamming, Harry. Just for a checkup. Or let me call him so he could —"

"You stop that! You stop that right now, and for good! I don't want to hear no more about doctors. I get laid up, I'll call one. And it won't be that Hamming who I ain't never seen in my life! It'll be Timkins, who took care'n us and brought our son into the world and. . ."

She began to cry, and he realized he'd said something crazy again. They had no son, never had a son. And Timkins — he'd died and they'd gone to his funeral. Or so Edna said.

He himself just couldn't remember it.

He went to the bed and sat down beside her. "Sorry. That

was just a dream I had. I'm still half-asleep this morning. Couldn't fall off last night, not till real late. Guess I'm a little nervous, what with all the new regulations and not working regular. I never meant we had a son." He waited then, hoping she'd say they *had* had a son, and he'd died or gone away. But of course she didn't.

HE went to the bathroom and washed. By the time he came to the kitchen, Edna had hotcakes on a plate and coffee in a cup. He sat down and ate. Part way through the meal, he paused. "Got an awful craving for meat," he said. "Goddam those rations! Man can't even butcher his own stock for his own table!"

"We're having meat for lunch," she said placatingly. "Nice cut of multi-pro."

"Multi-pro," he scoffed. "God knows what's in it. Like spam put through a grinder a hundred times and then baked into slabs. Can't hardly taste any meat there."

"Well, we got no choice. Country's on emergency rations. The current crisis, you know."

The way she said it irritated him. Like it was Scripture; like no one could question one word of it without being damned to Hell. He finished quickly and

without speaking went on out to the barn.

He milked and curried and fed and cleaned, and still was done inside of two hours. Then he walked slowly, head down, across the hay-strewn floor. He stopped, put out his hand as if to find a pole or beam that was too familiar to require raising his eyes, and almost fell as he leaned in that direction. Regaining his balance after a sideward staggering shuffle, he looked around, startled. "Why, this ain't the way I had my barn. . ."

He heard his own voice, and stopped. He fought the flash of senseless panic. Of course this was the way he'd had his barn built, because it was his barn!

He rubbed his hard hands together and said aloud, "Get down to the patch. Them tomatoes need fertilizer for tang." He walked outside and took a deep breath. Air was different, wasn't it? Sweet and pure and clean, like country air always was and always would be; but still, different somehow. Maybe sharper. Or was sharp the word? Maybe. . .

He went quickly across the yard, past the pig-pen — he'd had twelve pigs, hadn't he? Now he had four — behind the house to where the half-acre truck farm lay greening in the sun. He got to work. Sometime later, Edna

called to him. "Delivery last night, Harry. I took some. Pick up rest?"

"Yes," he shouted.

She disappeared.

He walked slowly back to the house. As he came into the front yard, moving toward the road and the supply bin, something occurred to him. *The car.* He hadn't seen the old Chevy in. . . how long? It'd be nice to take a ride to town, see a movie, maybe have a few beers.

No. It was against the travel regulations. He couldn't go further than Walt and Gloria Shanks' place. They couldn't go further than his. And the gas rationing. Besides, he'd sold the car, hadn't he? Because it was no use to him lying in the tractor shed.

HE whirled, staring out across the fields to his left. Why, the tractor shed had stood just fifty feet from the house!

No, he'd torn it down. The tractor was in town, being overhauled and all. He was leaving it there until he had use for it.

He went on toward the road, his head beginning to throb. Why should a man his age, hardly sick at all since he was a kid, suddenly start losing hold this way? Edna was worried. The Shanks had noticed it too.

He was at the supply bin —

like an old-fashioned wood bin; a box with a sloping flap lid. Deliveries of food and clothing and home medicines and other things were left here. You wrote down what you needed, and they left it — or whatever they allowed you — with a bill. You paid the bill by leaving money in the bin, and the next week you found a receipt and your new stuff and your new bill. And almost always you found some money from the government, for not planting wheat or not planting corn. It came out just about even.

He hauled out a sack of flour, half the amount of sugar Edna had ordered, some dried fruit, a new Homekit Medicine Shelf. He carried it into the house, and noticed a slip of paper pinned to the sugar bag. A television program guide.

Edna hustled over excitedly. "Anything good on this week, Harry?"

He looked down the listings, and frowned. "All old movies. Still only one channel. Still only from nine to eleven at night." He gave it to her, turned away; then stopped and waited. He'd said the same thing last week. And she had said the films were all new to her.

She said it now. "Why Harry, I've never seen this movie with Clark Gable. Nor the comedy

with Red Skeleton. Nor the other five neither."

"I'm gonna lie down," he said flatly. He turned and stepped forward, and found himself facing the stove. Not the door to the hall; the stove. "But the door. . ." he began. He cut himself short. He turned and saw the door a few feet to the left, beside the table. He went there and out and up the stairs (they too had moved; they too weren't right) and into the bedroom and lay down. The bedroom was wrong. The bed was wrong. The windows were wrong.

The world was wrong! Lord, the whole damned world was wrong!

EDNA didn't wake him, so they had a late lunch. Then he went back to the barn and let the four cows and four sheep and two horses into the pastures. Then he checked to see that Edna had fed the chickens right. They had only a dozen or so now.

When had he sold the rest? And when had he sold his other livestock?

Or had they died somehow? A rough winter? Disease?

He stood in the yard, a tall, husky man with pale brown hair and a face that had once been long, lean and strong and was now only long and lean. He

blinked gray eyes and tried hard to remember, then turned and went to the house. Edna was soaking dishes in the sink, according to regulations — one sinkful of dishwater a day. And one tub of bath water twice a week.

She was looking at him. He realized his anger and confusion must be showing. He managed a smile. "You remember how much we got for our livestock, Edna?"

"Same as everyone else," she said. "Government agents paid flat rates."

He remembered then, or thought he did. The headache was back. He went upstairs and slept again, but this time he had dreams, many of them, and all confused and all frightening. He was glad to get up. And he was glad to hear Walt and Gloria talking to Edna downstairs.

He washed his face, combed his hair and went down. Walt and Gloria were sitting on the sofa, Edna in the blue armchair. Walt was saying he'd gotten the new TV picture tube he'd ordered. "Found it in the supply bin this morning. Spent the whole day installing it according to the book of directions."

Harry said hi and they all said hi and he sat down and they talked about TV and gardens and livestock. Then Harry said, "How's Penny?"

"Fine," Gloria answered. "I'm starting her on the kindergarten book next week."

"She's five already?" Harry asked.

"Almost six," Walt said. "Emergency Education Regulations state that the child should be five years nine months old before embarking on kindergarten book."

"And Frances?" Harry asked. "Your oldest? She must be starting high. . ." He stopped, because they were all staring at him, and because he couldn't remember Frances clearly. "Just a joke," he said, laughing and rising. "Let's eat. I'm starved."

THEY ate in the kitchen. They talked — or rather—Edna, Gloria and Walt did. Harry nodded and said uh-huh and used his mouth for chewing.

Walt and Gloria went home at ten-fifteen. They said goodbye at the door and Harry walked away. He heard Gloria whispering something about Doctor Hamming.

He was sitting in the living room when Edna came in. She was crying. "Harry, please see the doctor."

He got up. "I'm going out. I might even sleep out!"

"But why, Harry, why?"

He couldn't stand to see her crying. He went to her, kissed

her wet cheek, spoke more softly. "It'll do me good, like when I was a kid."

"If you say so, Harry."

He left quickly. He went outside and across the yard to the road. He looked up it and down it, to the north and to the south. It was a bright night with moon and stars, but he saw nothing, no one. The road was empty. It was always empty, except when Walt and Gloria walked over from their place a mile or so south. But once it hadn't been empty. Once there'd been cars, people . . .

He had to do something. Just sitting and looking at the sky wouldn't help him. He had to go somewhere, see someone.

He went to the barn and looked for his saddle. There was no saddle. But he'd had one hanging right behind the door. Or had he?

He threw a blanket over Plum, the big mare, and tied it with a piece of wash line. He used another piece for a bridle, since he couldn't find that either, and didn't bother making a bit. He mounted, and Plum moved out of the barn and onto the road. He headed north, toward town.

Then he realized he couldn't go along the road this way. He'd be reported. Breaking travel regulations was a serious offense.

He didn't know what they did to you, but it wasn't anything easy like a fine.

He cut into an unfenced, unplanted field.

His headache was back, worse now than it had ever been. His entire head throbbed, and he leaned forward and put his cheek against Plum's mane. The mare whinnied uneasily, but he kicked her sides and she moved forward. He lay there, just wanting to go somewhere, just wanting to leave his headache and confusion behind.

He didn't know how long it was, but Plum was moving cautiously now. He raised his head. They were approaching a fence. He noticed a gate off to the right, and pulled the rope so Plum went that way. They reached the gate and he got down to open it, and saw the sign. "Phineas Grotton Farm." He looked up at the sky, found the constellations, turned his head, and nodded. He'd started north, and Plum had continued north. He'd crossed land belonging both to himself and the Franklins. Now he was leaving the Franklin farm. North of the Franklins were the Bessers. Who was this Phineas Grotton? Had he bought out Lon Besser? But anything like that would've gotten around.

Was he forgetting again?

WELL, no matter. Mr. Grotton would have to excuse his trespass. He opened the gate, led Plum through it, closed the gate. He mounted and rode forward, still north, toward the small Pangborn place and after the Pangborns the biggest farm in the county — old Wallace Elverton's place. The fields here, as everywhere in the county, lay fallow. Seemed as if the government had so much grain stored up they'd be able to get along without crops for years more.

He looked around. Somehow, the country bothered him. He wasn't sure why, but . . . everything was wrong.

His head weighed an agonized ton. He put it down again. Plum went sedately forward. After a while she stopped. Harry looked up. Another fence. And what a fence! About ten feet of heavy steel mesh, topped by three feet of barbed-wire — five separate strands. What in the world had Sam Pangborn been thinking of to put up a monster like this?

He looked around. The gate should be further west. He rode that way. He found no gate. He turned back, heading east. No gate. Nothing but fence. And wasn't the fence gradually curving inward? He looked back. Yes, there was a slight inward curve.



He dismounted and tied Plum to the fence, then stepped back and figured the best way to get to the other side.

The best way, the only way, was to claw, clutch and clamber, as they used to say back when he was a kid.

It took some doing. He tore his shirt on the barbed wire, but he got over and began walking, straight ahead, due north. The earth changed beneath his feet. He stooped and touched it. Sand. Hard-packed sand. He'd never seen the like of it in this county.

He walked on. A sound came to him; a rising-falling whisper. He listened to it, and looked up every so often at the sky, to make sure he was heading in the right direction.

And the sand ended. His shoes plunked over flooring.

Flooring!

He knelt to make sure, and his hand felt wooden planks. He rose, and glanced up to see if he was still outdoors. Then he laughed. It was a sick laugh, so he stopped it.

He took another step. His shoes sounded against the wood. He walked. More wood. Wood that went on, as the sand had. And the roaring sound growing louder. And the air changing, smelling like air never had before in Cultwait County.

HIS entire body trembled. His mind trembled too. He walked, and came to a waist-high metal railing, and made a tiny sound deep in his throat. He looked out over water, endless water rolling in endless waves under the night sky. Crashing water, topped with reflected silver from the moon. Pounding water, filling the air with spray.

He put out his hands and grasped the railing. It was wet. He raised damp fingers to his mouth. Salt.

He stepped back, back, and turned and ran. He ran wildly, blindly, until he could run no more. Then he fell, feeling the sand beneath him, and shut his eyes and mind to everything.

Much later, he got up and went to the fence and climbed it. He came down on the other side and looked around and saw Plum. He walked to her, mounted her, sat still. The thoughts, or dreams, or whatever they were which had been torturing him these past few weeks began torturing him again.

It was getting light. His head was splitting.

Davie. His son Davie. Fourteen years old. Going to high school in town. . .

Town! He should've gone there in the first place! He would ride east, to the road,

then head south, back toward home. That would bring him right down Main Street. Regulations or not, he'd talk to people, find out what was happening.

He kicked Plum's sides. The mare began to move. He kept kicking until she broke into a brisk canter. He held on with hands and legs.

Why hadn't he seen the Pangborns and Elvertons lately — a long time lately?

The ocean. He'd seen the ocean. Not a reservoir or lake made by flooding and by damming, but salt water and enormous. An ocean, where there could be no ocean. The Pangborns and Elvertons had been where that ocean was now. And after the Elvertons had come the Dobsons. And after them the new plastics plant. And after that the city of Crossville. And after that. . .

He was passing his own farm. He hadn't come through town, and yet here he was at his own farm. Could he have forgotten where town was? Could it be north of his home, not south? Could a man get so confused as to forget things he'd known all his life?

He reached the Shanks' place, and passed it at a trot. Then he was beyond their boundaries and breaking regulations again. He

stayed on the road. He went by a small house and saw colored folks in the yard. There'd been no colored folks here. There'd been Eli Bergen and his family and his mother, in a bigger, newer house. The colored folks heard Plum's hooves and looked up and stared. Then a man raised his voice. "Mistah, you breakin' regulations! Mistah, the police gonnah get you!"

HE rode on. He came to another house, neat and white, with three children playing on a grassy lawn. They saw him and ran inside. A moment later, adult voices yelled after him:

"You theah! Stop!"

"Call the sheriff! He's headin' foah Piney Woods!"

There was no place called Piney Woods in this county.

Was this how a man's mind went?

He came to another house, and another. He passed ten all told, and people shouted at him for breaking regulations, and the last three or four sounded like Easterners. And their houses looked like pictures of New England he'd seen in magazines.

He rode on. He never did come to town. He came to a ten-foot fence with a three-foot barbed-wire extension. He got off Plum and ripped his clothing climbing. He walked over hard-

packed sand, and then wood, and came to a low metal railing. He looked out at the ocean, gleaming in bright sunlight, surging and seething endlessly. He felt the earth sway beneath him. He staggered, and dropped to his hands and knees, and shook his head like a fighter hit too many times. Then he got up and went back to the fence and heard a sound. It was a familiar sound, yet strange too. He shaded his eyes against the climbing sun. Then he saw it — a car. *A car!*

IT was one of those tiny foreign jobs that run on practically no gas at all. It stopped beside him and two men got out. Young men with lined, tired faces; they wore policemen's uniforms. "You broke regulations, Mr. Burr. You'll have to come with us."

He nodded. He wanted to. He wanted to be taken care of. He turned toward Plum.

The other officer was walking around the horse. "Rode her hard," he said, and he sounded real worried. "Shouldn't have done that, Mr. Burr. We have so very few now. . ."

The officer holding Harry's arm said, "Pete."

The officer examining Plum said, "It won't make any difference in a while."

Harry looked at both of them, and felt sharp, personal fear.

"Take the horse back to his farm," the officer holding Harry said. He opened the door of the little car and pushed Harry inside. He went around to the driver's side and got behind the wheel and drove away. Harry looked back. Pete was leading Plum after them; not riding him, walking him. "He sure must like horses," he said.

"Yes."

"Am I going to jail?"

"No."

"Where then?"

"The doctor's place."

They stopped in front of the new house two miles past Dugan's farm. Except he'd never seen it before. Or had he? Everyone seemed to know about it — or was everyone only Edna and the Shanks?

He got out of the car. The officer took his arm and led him up the path. Harry noticed that the new house was big.

When they came inside, he knew it wasn't like any house he'd ever seen or heard of. There was this long central passageway, and dozens of doors branched off it on both sides, and stairways went down from it in at least three places that he could see, and at the far end — a good two hundred yards away — a big ramp led upward. And it was all gray plaster walls and dull black floors and cold white lighting,

like a hospital, or a modern factory, or maybe a government building. Except that he didn't see or hear people.

He did hear *something*; a low, rumbling noise. The further they came along the hall, the louder the rumbling grew. It seemed to be deep down somewhere.

THEY went through one of the doors on the right, into a windowless room. A thin little man with bald head and frameless glasses was there, putting on a white coat. His veiny hands shook. He looked a hundred years old. "Where's Petey?" he asked.

"Petey's all right, Dad. Just leading a horse back to Burr's farm."

The old man sighed. "I didn't know what form it would take. I expected one or two cases, but I couldn't predict whether it would be gradual or sudden, whether or not it would lead to violence."

"No violence, Dad."

"Fine, Stan." He looked at Harry. "I'm going to give you a little treatment, Mr. Burr. It'll settle your nerves and make everything. . ."

"What happened to Davie?" Harry asked, things pushing at his brain again.

Stan helped him up. "Just step this way, Mr. Burr."

He didn't resist. He went through the second door into the room with the big chair. He sat down and let them strap his arms and legs and let them lower the metal thing over his head. He felt needles pierce his scalp and the back of his neck. He let them do what they wanted; he would let them kill him if they wanted. All he asked was one answer so as to know whether or not he was insane.

"What happened to my son Davie?"

The old man walked across the room and examined what looked like the insides of a dozen big radios. He turned, his hand on a switch.

"Please," Harry whispered. "Just tell me about my son."

The doctor blinked behind his glasses, and then his hand left the switch. "Dead," he said, his voice a rustling of dried leaves. "Like so many millions of others. Dead, when the bombs fell. Dead, as everyone knew they would be and no one did anything to prevent. Dead. Perhaps the whole world is dead — except for us."

Harry stared at him.

"I can't take the time to explain it all. I have too much to do. Just three of us — myself and my two sons. My wife lost her mind. I should have

helped her as I'm helping you."

"I don't understand," Harry said. "I remember people, and things, and where are they now? Dead? People can die, but farms, cities. . ."

"I haven't the time," the doctor repeated, voice rising. "I have to run a world. Three of us, to run a world! I built it as best I could, but how large could I make it? The money. The years and years of work. The people calling me insane when they found out . . . but a few giving me more money, and the work going on. And those few caught like everyone else, unprepared when the holocaust started, unprepared and unable to reach my world. So they died. As I knew they would. As they should have known they would."

Harry felt the rumbling beneath him. Engines?

"You survived," the doctor said. "Your wife. A few hundred others in the rural areas. One other family in your area. I survived because I lived for survival, like a mole deep in the earth, expecting the catastrophe every minute. I survived because I gave up living to survive." He laughed, high and thin.

His son said, "Please, Dad. . ."

"No! I want to talk to someone sane! You and Petey and I — we're all insane, you know. Three years now, playing God,

waiting for some land, any land, to become habitable. And knowing everything, and surrounded by people who are sane only because I made sure they would know nothing." He stepped forward, glaring at Harry. "Now do you understand? I went across the country, picking up a few of the few left alive. Most were farmers, and even where some weren't I picked the farmers anyway. Because farmers are what we'll need, and all the rest can evolve later. I put you and the others, eighty-six all told, from every section of the country, on my world, the only uncontaminated land left. I gave you back your old lives. I couldn't give you big crops because we don't need big crops. We would only exhaust our limited soil with big crops. But I gave you vegetable gardens and livestock and, best of all, *sanity*! I wiped the insane moments from your minds. I gave you peace and consigned myself, my sons, my own wife. . ."

He choked and stopped.

Stan ran across the room to the switch. Harry watched him, and his brain struggled with an impossible concept. He heard the engines and remembered the ocean on two sides; on four sides had he bothered to check south and east; on *all* sides if that fence continued to curve in-

ward. Ocean, and there was no ocean in Iowa.

And this wasn't Iowa.

The explosions had ripped the world, and he'd tried to get to town to save Davie, and there'd been no town and there'd been no people and there'd been only death and poison in the air and even those few people left had begun to die, and then the truck with the huge trailer had come, the gleaming trailer with the little man and his trembling wife and his two sons. . .

SUDDENLY, he understood. And understanding brought not peace but the greatest terror he'd ever known. He screamed, "We're on. . ." but the switch was thrown and there was no more speech. For an hour. Then he got out of the chair and said, "Sure glad I took my wife's advice and came to see you, Doctor Hamming. I feel better already, and after only one . . . What do you call these treatments?"

"Diathermy," the little doctor muttered.

Harry gave him a five-dollar

bill. The doctor gave him two singles in change. "That's certainly reasonable enough," Harry said.

The doctor nodded. "There's a police officer in the hall. He'll drive you home so there won't be any trouble with the travel regulations."

Harry said, "Thanks. Think we'll ever see the end of travel regulations and rationing and all the rest of the emergency?"

"You will, Mr. Burr."

Harry walked to the door.

"We're on an ark," the doctor said.

Harry turned around, smiling. "What?"

"A test, Mr. Burr. You passed it. Goodbye."

Harry went home. He told Edna he felt just great! She said she'd been worried when an officer found Plum wandering on the road; she thought maybe Harry had gone off somewhere and broken travel regulations.

"Me?" he exclaimed, amazed.

"Break travel regulations? I'd as soon kill a pig!"

— HERBERT D. KASTLE

mail your contribution



give AMERICAN CANCER SOCIETY

*The offices of
Singlemaster, Hucksting
and Battlemont held something
that could destroy the universe
and its name was . . .*

A-W-F

UNLIMITED

By FRANK HERBERT

Illustrated by GAUGHAN

THE MORNING the space armor problem fell into the agency's lap, Gwen Everest had breakfast at her regular restaurant, an automated single-niche place catering to bachelor girls. Her order popped out of the slot onto her table, and immediately the tabletop projecta-menu switched to selling Interdorma's newest Interpretive Telelog.

"Your own private dream translator! The secret companion to every neurosis!"

Gwen stared at the inch-high words doing a skitter dance above her fried eggs. She had written that copy. Her food beneath the ad looked suddenly tasteless. She pushed the plate away.

Along the speedwalk into Manhattan a *you-seeker*, its robo-flier senses programmed to her susceptibilities, flew beside her ear. It was selling a year's supply of Geramyl — "the breakfast drink that helps you LIVE longer!"

The selling hook this morning was a Gwen Everest idea: a life insurance policy with the first year's premiums paid — "absolutely FREE if you accept this offer now!"

In sudden anger, she turned on the roboflier, whispered a code phrase she had wheedled from an engineer who serviced the things. The roboflier darted upward in sudden erratic flight, crashed into the side of a building.

A small break in her control. A beginning.

Waiting for Gwen along the private corridor to the Singlemaster, Hucksting and Battlemont executive offices were displays from the recent Religion of the Month Club campaign. She ran a gamut of adeicals, layouts, slogans, projos, quartersheets, skinnies. The works.

"Subscribe now and get these religions absolutely FREE! Complete text of the Black Mass plus Abridged Mysticism!"

She was forced to walk through an adecal announcing: "Don't be Half Safe! Believe in Everything! Are you sure that African Bantu Witchcraft is not the True Way?"

At the turn of the corridor stood a male-female graphic with flesh-stimulant skinnies and super-voices, "Find peace through Tantrism."

The skinnies made her flesh crawl.

Gwen fled into her office, slumped into her desk chair. With mounting horror, she realized that she had either written or supervised the writing of every word, produced every selling idea along that corridor.

The interphon on her desk emitted its fluted "Good morning." She slapped the blackout switch to keep the instrument from producing an image. The last thing she wanted now was to see one of her co-workers.

"Who is it?" she barked.

"Gwen?" No mistaking that voice: Andre Battlemont, bottom name on the agency totem.

"What do you want?" she demanded.

"Our Gwenny is feeling nasty this morning, isn't she?"

"Oh, Freud!" She slapped the disconnect, leaned forward with

elbows on the desk, put her face in her hands. *Let's face it, she thought. I'm 48, unmarried, and a prime mover in an industry that's strangling the universe. I'm a professional strangler.*

"Good morning," fluted the interphon.

She ignored it.

"A strangler," she said.

Gwen recognized the basic problem here. She had known it since childhood. Her universe was a continual replaying of "The Emperor's New Suit." She saw the nakedness.

"Good morning," fluted the interphon.

She dropped her right hand away from her face, flicked the switch. "Now what?"

"Did you cut me off, Gwen?"

"What if I did?"

"Gwen, please! We have a problem."

"We always have problems."

Battlemont's voice dropped one octave. "Gwen. This is a Big problem."

Uncanny the way he can speak capital letters, she thought. She said: "Go away."

"You've been leaving your Interdorma turned off!" accused Battlemont. "You mustn't. Neurosis can creep up on you."

"Is that why you called me?" she asked.

"Of course not."

"Then go away."

Battlemont did a thing then that everyone from Singlemaster on down knew was dangerous to try with Gwen Everest. He pushed the override to send his image dancing above her interphon.

AFTER the momentary flash of anger, Gwen correctly interpreted the act as one of desperation. She found herself intrigued. She stared at the round face, the pale eyes (definitely too small, those eyes), the pug nose and wide gash of mouth above almost no chin at all.

Plus the hairline in full retreat.

"Andre, you are a mess," she said.

He ignored the insult. Still speaking in the urgency octave, he said: "I have called a full staff meeting. You must attend at once."

"Why?"

"There are two military people in there, Gwen." He gulped. "It's desperate. Either we solve their problem or they will ruin us. They will draft every man in the agency!"

"Even you?"

"Yes!"

She moved her right hand toward the interphon's emergency disconnect. "Good-by, Andre."

"Gwen! My God! You can't let me down at a time like this!"

"Why not?"

He spoke in breathless haste. "We'll raise your salary. A bonus. A bigger office. More help."

"You can't afford me now," she said.

"I'm begging you, Gwen. Must you abuse me?"

She closed her eyes, thought: *The insects! The damned little insects with their crummy emotions! Why can't I tell them all to go to composite hell?* She opened her eyes, said: "What's the military's flap?"

Battlemont mopped his forehead with a pastel blue handkerchief. "It's the Space Service," he said. "The female branch. The WOMS. Enlistments have fallen to almost nothing."

She was interested in spite of herself. "What's happened?"

"Something to do with the space armor. I don't know. I'm so upset."

"Why have they tossed it into our laps like this? The ultimatum, I mean."

Battlemont glanced left and right, leaned forward. "The grapevine has it they're testing a new theory that creative people work better under extreme stress."

"The Psychological Branch again," she said. "Those jackasses!"

"But what can we do?"

"Hoist 'em," she said. "You run along to the conference."

"And you'll be there, Gwen?"

"In a few minutes."

"Don't delay too long, Gwen."

Again he mopped his forehead with the blue handkerchief. "Gwen, I'm frightened."

"And with good reason." She squinted at him. "I can see you now: Nothing on but a lead loin-cloth, dumping fuel into a radioactive furnace. Freud, what a picture!"

"This is no joke, Gwen!"

"I know."

"You are going to help?"

"In my own peculiar way, Andre." She hit the emergency disconnect.

ANDRE Battlemont turned away from his interphon, crossed his office to a genuine Moslem prayer rug. He sat down on it facing the floor-to-ceiling windows that looked eastward across midtown Manhattan. This was the 1479th floor of the Stars of Space building, and it was quite a view out there whenever the clouds lifted. But the city remained hidden beneath a low ceiling this morning.

Up here it was sunny, though — except in Battlemont's mood. A fear-cycle ululated along his nerves.

What he was doing on the prayer rug was practicing Yoga breathing to calm those nerves. The military could wait. They had to wait. The fact that he

faced the general direction of Mecca was left over from two months before. Yoga was a month old. There was always some carry-over.

Battlemont had joined the Religion of the Month Club almost a year ago — seduced by his own agency's deep motivation campaign plus the Brotherhood Council's seal of approval.

This month it was the Reinspired Neo-Cult of St. Freud.

A test adecal superimposed itself on the cloud-floor view beneath him. It began playing the latest Gwen-Everest-inspired pitch of the IBMausoleum. Giant rainbow letters danced across the fleecy background.

"Make your advice immortal! Let us store your voice and thought patterns in everlasting electronic memory circuits! When you are gone, your loved ones may listen to your voice as you answer their questions exactly the way you would most likely have answered them in Life!"

Battlemont shook his head. The agency, fearful of its dependence on the live Gwen Everest, had secretly recorded her at a staff conference once. Very illegal. The unions were death on it. But the IBMausoleum had broken down with the first question put to Gwen's ghost-voice.

"Some people have thought patterns that are too complex to

permit accurate psyche-record," the engineer explained.

Battlemont did not delude himself. The sole genius of the agency's three owners lay in recognizing the genius of Gwen Everest. She was the agency.

It was like riding the tiger to have such an employee. Singlemaster, Hucksting and Battlemont had ridden this tiger for 22 years. Battlemont closed his eyes, pitched her in his mind: a tall, lean woman, but with a certain grace. Her face was long, dominated by cold blue eyes, framed in waves of auburn hair. She had a wit that could slash you to ribbons, and that priceless commodity: the genius to pull selling sense out of utter confusion.

Battlemont sighed.

He was in love with Gwen Everest. Had been for 22 years. It was the reason he had never married. His Interdorma explained that it was because he wanted to be dominated by a strong woman.

But that only explained. It didn't help.

For a moment, he thought wistfully of Singlemaster and Hucksting, both taking their annual three-month vacation at the geriatrics center on Oahu. Battlemont wondered if he dared ask Gwen to take her vacation with him. Just once.

No.

He realized what a pitiful figure he made on the prayer rug. Pudgy little man in a rather unattractive blue suit.

Tailors did things for him that they called "improving your good points." But except when he viewed himself in a Vesta-Mirror to see the sample clothes projected back onto his own idealized image, he could never pin down what those "good points" were.

Gwen would certainly turn him down.

He feared that more than anything. As long as there remained the possibility . . .

Memory of the waiting Space Service deputation intruded. Battlemont trembled, broke the Yoga breathing pattern. The exercise was having its usual effect: a feeling of vertigo. He heaved himself to his feet.

"One cannot run away from fate," he muttered.

That was a carry-over from the Karma month.

ACCORDING to Gwen, the agency's conference room had been copied from a Florentine bordello's Emperor Room. It was a gigantic space. The corners were all flossy curliques in heavy gilding, an effect carried over into deep carvings on the wall panels. The ceiling was a

mating of Cellini cupids with Dali landscapes.

Period stuff. Antique.

Into this baroque setting had been forced a one-piece table 6 feet wide and 42 feet long. It was an enlarged bit of Twentieth Century Wallstreetiana fenced in by heavy wooden chairs. Beanbag paperweights and golden wheel ashtrays graced every place.

The air of the room was blue with the smoke of mood-cigs. ("It rhymes with Good Bigs!") The staff seated around the table was fighting off the depressant effect of the two Space Service generals, one male and one female, seated in flanking positions beside Battlemont's empty chair. There was a surprising lack of small talk and paper rustling.

All staff members had learned of the ultimatum via the office grapevine.

Battlemont slipped in his side door, crossed to his chair at the end of the table, dropped into it before his knees gave out. He stared from one frowning military face to the other.

No response.

He cleared his throat. "Sorry I'm . . . ah . . . Pressing business. Unavoidable." He cast a frantic glance around the table. No sign of Gwen. He smiled at one officer, the other.

No response.

On his right sat Brigadier General Sonnet Finnister of the WOMS (Women of Space). Battlemont had been appalled to see her walk. Drill-sergeant stride. No nonsense. She wore a self-designed uniform: straight pleated skirt to conceal bony hips, a loose blouse to camouflage lack of upper development, and a long cape to confuse the whole issue. Atop her head sat a duck-billed, flat-fronted cap that had been fashioned for the single purpose of hiding the Sonnet Finnister forehead, which went too high and too wide.

She seldom removed the hat.

(This particular hat, Battlemont's hurried private investigations had revealed, looked hideous on every other member of the WOMS. To a woman, they called it "the Sonnet Bonnet." There had been the additional information that the general herself was referred to by underlings as "Sinister Finnister" — partly because of the swirling cape.)

On Battlemont's left sat General Nathan Owling of the Space Engineers. Better known as "Howling Owling" because of a characteristic evidenced when he became angry. He appeared to have been shaped in the officer caste's current mold of lean, blond athlete. The blue eyes reminded Battlemont of Gwen's

eyes, except that the man's appeared colder.

If that were possible.

Beyond Owling sat Leo Prim, the agency's art director. He was a thin young man, thin to a point that vibrated across the edge of emaciation. His black hair, worn long, held a natural wave. He had a narrow Roman nose, soulful brown eyes, strong cleft in the chin, generous mouth with large lips. A mood-cig dangled from the lips.

If Battlemont could have chosen his own appearance, he would have liked to look like Leo Prim. Romantic. Battlemont caught Prim's attention, ventured a smile of camaraderie.

No response.

General Sonnet Finnister tapped a thin finger on the tabletop. It sounded to Battlemont like the slack drum of a death march.

"Hadn't we better get started?" demanded Finnister.

"Are we all here — finally?" asked Owling.

Battlemont swallowed past a lump in his throat. "Well . . . ah . . . no . . . ah . . ."

Owling opened a briefcase in his lap, glanced at an intelligence report, looked around the table. "Miss Everest is missing," he announced.

Finnister said: "Couldn't we go ahead without her?"

"We'll wait," said Owling. He

was enjoying himself. *Damned parasites need a touch of the whip now and then!* he thought. *Shows 'em where they stand.*

FINNISTER glared at Owling, a hawk stare that had reduced full colonels (male) to trembling. The stare rolled off Owling without effect. *Trust the high command to pair me with a male supremacy type like Owling!* she thought.

"Is this place safe from snooping?" asked Owling.

Battlemont turned his own low-wattage glare on the staff seated in the mood smoke haze around the table. No glance met his. "That's all anybody ever does around here!" he snapped.

"What?" Owling started to rise. "Busybodies!" blared Battlemont. "My whole staff!"

"Ohhh," Owling sank back into his chair. "I meant a different kind of snooping."

"Oh, that," Battlemont shrugged, suppressed an urge to glance up at the conference room's concealed recorder lenses. "We cannot have our ideas pirated by other agencies, you know. Absolutely safe here."

Gwen Everest chose this moment for her entrance. All eyes followed her as she came through the end door, strode down the length of the room.

Battlemont admired her grace.

Such a feminine woman in spite of her strength. So different from the female general.

Gwen found a spare chair against the side wall, crowded it in between Battlemont and Finnister.

The commander of the WOMS glared at the intruder. "Who are you?"

Battlemont leaned forward. "This is Miss Everest, our . . . ah . . ." He hesitated, confused. Gwen had never had an official title with the agency. Never needed it. Everyone in the place knew she was the boss. "Ahh . . . Miss Everest is our . . . ah . . . director of coordination," said Battlemont.

"Why! That's a wonderful title!" said Gwen. "I must get it printed on my stationery." She patted Battlemont's hand, faced him and, in her best undercover-agent-going-into-action voice, said: "Let's have it, Chief. Who are these people? What's going on?"

General Owling nodded to Gwen. "I'm Owling, General, Space Engineers." He gestured to the rocket splash insignia on his shoulder. "My companion is General Finnister, WOMS."

Gwen had recognized the famous Finnister face. She smiled brightly, said: "General Woms!"

"Finnister!" snapped the female general.

"Yes, of course," said Gwen. "General Finnister Woms. Must not go too informal, you know."

Finnister spoke in slow cadence: "I . . . am . . . General . . . Sonnet . . . Finnister . . . of . . . the . . . Women . . . of . . . Space! The WOMS!"

"Oh, how stupid of me," said Gwen. "Of course you are." She patted the general's hand, smiled at Battlemont.

Battlemont, who well knew the falsity of this mood in Gwen Everest, was trying to scrunch down out of sight in his chair.

In that moment, Gwen realized with a twinge of fear that she had reached a psychic point of no return. Something slipped a cog in her mind. She glanced around the table. Familiar faces leaped at her with unreal clarity. Staring eyes. (The best part of a conference was to watch Gwen in action.) *I can't take any more of this, thought Gwen. I have to declare myself.*

She focused on the military. The rest of the people in this room owned little pieces of her, but not these two. Owling and Finnister. Space generals. Symbols. Targets!

Let the chips fall where they may! Fire when ready, Gridley. Shoot if you must this old gray head . . . Wait until you see the whites of their eyes.

Gwen nodded to herself.

One misstep and the agency was ruined.

Who cares?

It all passed in a split second, but the decision was made.

Rebellion!

GWEN turned her attention on Owling. "Would you be kind enough to end this stalling around and get the meeting under way?"

"Stall . . ." Owling broke it off. The intelligence report had said Gwen Everest was fond of shock tactics. He gave her a curt nod, passed the nod to Finnister.

The female general addressed Battlemont. "Your agency, as we explained to you earlier, has been chosen for a vital task, Mr. Battlemont."

"Battlemont," said Gwen.

Finnister stopped short. "What?"

"His name is Battlemont, not Battelfield," said Gwen.

"What of it?"

"Names are important," said Gwen. "I'm sure you appreciate this."

The Finnister cheeks flushed. "Quite!"

Owling stepped into the breach. "We are authorized to pay this agency double the usual fee for performance," he said. "However, if you fail us we'll draft every male employee here into the Space Service!"

"What an asinine idea!" said Gwen. "Our people would destroy the Space Service. From within." Again she smiled at Battlemont. "Andre here could do it all by himself. Couldn't you, ducky?" She patted Battlemont's cheek.

Battlemont tried to crouch farther down into the chair. He avoided the eyes of the space brass, said: "Gwen . . . please . . ."
"What do you mean, destroy the Space Service?" demanded Finnister.

Gwen ignored her, addressed Owling. "This is another one of the Psych Branch's brainstorm," she said. "I can smell the stench of 'em in every word."

Owling frowned. As a matter of fact, he had the practical builder's suspicion of everything subjective. This Everest woman made a good point there. But the military had to stand shoulder to shoulder against outsiders. He said: "I don't believe you are properly equipped to fathom military tactics. Let's get on to the problem we . . ."

"Military tactics yet!" Gwen rapped the table. "Deploy your forces, men. This is it! Synchronize your watches. Over the top!"

"Gwen!" said Battlemont.

"Of course," said Gwen. She faced Finnister. "Would you mind awfully outlining your problem in simple terms that our

unmilitarized minds could understand?"

A pause, a glare. Finnister spewed her words through stiff lips. "Enlistments in the WOMS have fallen to an alarming degree. You are going to correct this."

Behind Gwen, Battlemont nodded vigorously.

"Women can release men for the more strenuous tasks," said Owling.

"And there are many things women can do that men cannot do," said Finnister.

"Absolutely essential," said Owling.

"Absolutely," agreed Finnister. "Can't draft women, I suppose," said Gwen.

"Tried to get a bill through," said Owling. "Damned committee's headed by an anti-military woman."

"Good for her," said Gwen. "You do not sound like the person for this job," said Owling. "Perhaps . . ."

"Oh, simmer down," said Gwen. "Miss Everest is the best in the business," said Battlemont.

Gwen said: "Why are enlistments down? You've run the usual surveys, I suppose."

"It's the space armor," said Finnister. "Women don't like it." "Too mechanical," said Owling. "Too practical."

"We need . . . ah . . . glamor,"

said Finnister. She adjusted the brim of her cap.

Gwen frowned at the cap, cast a glance up and down the Finnister uniform. "I've seen the usual news pictures of the armor," she said. "What do they wear underneath it? Something like your uniform?"

Finnister suppressed a surge of anger. "No. They wear special fatigues."

"The armor cannot be removed while they are in space," said Owling.

"Oh?" said Gwen. "What about physical functions, that sort of thing?"

"Armor takes care of everything," said Owling.

"Apparently not *quite* everything," murmured Gwen. She nodded to herself, mulling tactics.

BATTELMONT straightened, sniffed the atmosphere of the conference room. Staff all alert, quiet, attentive. Mood had lightened somewhat. Gwen appeared to be taking over. Good old Gwen. Wonderful Gwen. No telling what she was up to. As usual. She'd solve this thing, though. Always did. Unless . . .

He blinked. Could she be toying with them? He tried to imagine Gwen's thought patterns. Impossible. IBMausoleum couldn't even do it. Unpredictable. All Battlemont could be certain of

was that Gwen would get a gigantic belly laugh from the picture of the agency's male staff members drafted, slaving away on space freighters.

Battlemont trembled.

General Finnister was saying: "The problem is not one of getting women to enlist for Earth-based service. We need them in the ships, the asteroid stations, the . . ."

"Let's get this straight," said Gwen. "My great-great-grandmother was in some kind of armed service. I read her diary once. She called it the 'whackies' or something like that."

"WACS," said Finnister.

"Yes," said Gwen. "It was during the war with Spain."

"Japan," said Owling.

"What I'm driving at is, why all the sudden interest in women? My great-great-grandmother had one merry old time running away from some colonel who wanted . . . Well, you know. Is this some kind of a dodge to provide women for your space colonels?"

Finnister scowled her blackest. Quickly suppressed chuckles sounded around the table.

Owling decided to try a new tack. "My dear lady, our motives are of the highest. We need the abilities of women so that mankind can march side by side to the stars."

Gwen stared at him in open

admiration. "Go-wan!" she said.

"I mean it," said Owling.

"You're a poet!" said Gwen. "Oh . . . and I've wronged you. Here I was — dirty-minded me — thinking you wanted women for base purposes. And all the time you wanted *companions*. Someone to share this glorious new adventure."

Again, Battlemont recognized the danger signals. He tried to squeeze himself into as small a target as possible. Most of the staff around the table saw the same signals, but they were intent, fascinated.

"Exactly!" boomed Finnister.

Gwen's voice erupted in an angry snarl: "And we name all the little bastards after the stars in Virgo, eh?"

It took a long moment for Finnister and Owling to see that they had been gulled. Finnister started to rise.

"Siddown!" barked Gwen. She grinned. She was having a magnificent time. Rebellion carried a sense of euphoria.

Owling opened his mouth, closed it without a howl.

Finnister sank back into her chair.

"Shall we get down to business?" snapped Gwen. "Let's look at this glorified hunk of tin you want us to glamorize."

Finnister found something she could focus her shocked attention

on. "Space armor is mostly plastic, not tin."

"Plastic-schmastic," said Gwen. "I want to see your Iron Gertie."

General Owling took two deep breaths to calm his nerves, snapped open the briefcase, extracted a folder of design sketches. He pushed them toward Gwen — a hesitant motion as though he feared she might take his hand with them. He now recognized that the incredible intelligence report was correct: this astonishing female was the actual head of the agency.

"Here's — Iron Gertie," he said, and forced a chuckle.

Gwen leafed through the folder while the others watched.

Battlemont stared at her. He realized something the rest of the staff did not: Gwen Everest was not being the usual Gwen Everest. There was a subtle difference. An abandon. Something was very wrong!

WITHOUT looking up from the drawings, Gwen addressed herself to Finnister. "That uniform you're wearing, General Finnister. You design that yourself?"

"What? Oh, yes. I did."

Battlemont trembled.

Gwen reached out, rapped one of Finnister's hips. "Bony," she said. She turned a page in the folder, shook her head.

"Well!" exploded Finnister.

Still without looking up, Gwen said: "Simmer down. How about the hat? You design that, too?"

"Yesss!" It was a sibilant explosion.

Gwen lifted her attention to the hat, spoke in a reasonable tone: "Possibly the most hideous thing I've ever seen."

"Well of all the —"

"Are you a fashion designer?" asked Gwen politely.

Finnister shook her head as though to clear it of cobwebs.

"You are *not* a fashion designer?" pressed Gwen.

Finnister bit the words off. "I have had some experience in choosing —"

"The answer is no, then," said Gwen. "Thought so." She brought her attention back to the folder, turned a page.

Finnister glared at her in open-mouthed rage.

Gwen glanced up at Owling. "Why'd you put the finger on this agency?"

Owling appeared to have trouble focusing his attention on Gwen's question. Presently, he said: "You were . . . it was pointed out that this agency was one of the most successful in . . . if not the most successful . . ."

"We were classified as experts, eh?"

"Yes. If you want to put it that way."

"I want to put it that way." She glanced at Finnister. "So we let the experts do the designing, is that clear? You people keep your greasy fingers off. Understood?" She shot a hard stare at Owling, back to Finnister.

"I don't know about you!" Finnister snapped at Owling, "but I've had all —"

"If you value your military career you'll just sit down and listen," said Gwen. Again, she glared at Owling. "Do you understand?"

Owling shook his head from side to side. Amazement dominated him. Abruptly, he realized that his head shaking could be interpreted as negative. He bobbed his head up and down, decided in mid-motion that this was undignified. He stopped, cleared his throat.

What an astonishing female! he thought.

Gwen pushed the folder of design sketches up to Leo Prim, the art director. "Tell me, General Owling," she said, "why is the armor so bulky?"

Leo Prim, who had opened the folder, began to chuckle.

"Marvelous, isn't it?" said Gwen.

Someone farther up the table asked: "What is?"

Gwen kept her attention on Owling. "Some jassack engineer in the Space Service designed a



test model suit of armor like a gigantic woman — breasts and all.” She glanced at Finnister. “You ran a survey on the stupid thing, of course?”

Finnister nodded. She was shocked speechless.

“I could’ve saved you the trouble,” said Gwen. “One of the reasons you’d better listen carefully to what *expert me* has to say. No woman in her right mind would get into that thing. She’d feel big — and she’d feel naked.” Gwen shook her head. “Freud! What a combination!”

Owling wet his lips with his tongue. “Ah, the armor has to provide sufficient shielding against radiation, and it must remain articulate under extremes of pressure and temperature,” he said. “It can’t be made any smaller and still permit a human being to fit into it.

“Okay,” said Gwen. “I have the beginnings of an idea.”

She closed her eyes, thought: *These military jerks are a couple of sitting ducks. Almost a shame to pot them.* She opened her eyes, glanced at Battlemont. His eyes were closed. He appeared to be praying. *Could be the ruination of poor Andre and his lovely people, too,* she thought. *What a marvelous collection of professional stranglers! Well, can’t be helped. When Gwen Everest goes out, she goes out in a blaze of*

glory! All flags flying! Full speed ahead! Damn the torpedoes!

“Well?” said Owling.

Fire one! thought Gwen. She said: “Presumably, you have specialists, experts who can advise us on technical details.”

“At your beck and call whenever you say the word,” said Owling.

BATTELMONT opened his eyes, stared at the back of Gwen’s neck. A ray of hope stabbed through his panic. Was it possible that Gwen was really taking over?

“I’ll also want all the dope on which psychological types make the best WOMS,” said Gwen. “If there is such a thing as a best WOM.”

Battlemont closed his eyes, shuddered.

“I don’t believe I’ve ever been treated this high-handedly in my entire career!” blurted Finnister. “I’m not entirely sure that —”

“Just a moment, please,” said Owling. He studied Gwen, who was smiling at him. The intelligence report said this woman was “probable genius” and should be handled delicately.

“I’m only sorry the law doesn’t give us the right to draft women, too!” barked Finnister.

“Then you wouldn’t really have this problem, would you?” asked Gwen. She turned her

smile on Finnister. It was full of beatitudes.

Owling said: "I know we have full authority to handle this at our own discretion, General Finnister, and I agree that we've been subjected to some abuse but . . ."

"Abuse!" Finnister said.

"And high time, too," said Gwen.

A violent shudder passed through Battlemont. He thought: *We are doomed!*

"However," said Owling, "we mustn't let our personal feelings cloud a decision for the good of the service."

"I hear the bugles blowing," murmured Gwen.

"This agency was chosen as the one most likely to solve the problem," said Owling.

"There *could* have been a mistake!" said Finnister.

"Not likely."

"You are determined to turn this thing over to . . . to . . ." Finnister broke off, tapped her palms on the table top.

"It's advisable," said Owling. He thought: *This Gwen Everest will solve our problem. No problem could resist her. No problem would dare!*

General Owling had become a Gwenophile.

"Very well, then," snarled Finnister. "I will reserve my judgment."

General Finnister had become a Gwenophobe.

Which was part of Gwen Everest's program.

"I presume you two will be available for technical consultations from time to time," said Gwen.

"Our subordinates take care of details," said Owling. "All General Finnister and I are interested in is the big picture, the key to the puzzle."

"Big picture, key to puzzle," mused Gwen. "Wonderful idea."

"What?" Owling stared at her, puzzled.

"Nothing," said Gwen. "Just thinking out loud."

Owling stood up, looked at Finnister. "Shall we be going?"

Finnister also stood up, turned toward the door at the end of the room. "Yesss!"

Together, one on each side of the table, they marched the length of the room: tump-a-thump-a-tump-a-tump-a-tump . . . Just as they reached the door and Owling opened it, Gwen jumped to her feet. "Charrrrge!" she shouted.

The two officers froze, almost turned, thought better of it. They left, slamming the door.

Battlemont spoke plaintively into the silence. "Gwen, why do you destroy us?"

"Destroy you? Don't be silly!"

"But, Gwen . . ."

"Please be quiet, Andre; you're interrupting my train of thought." She turned to Leo Prim. "Leo, take those sketches and things of that big-breasted Bertha they designed. I want adecal workups on them, full projos, the entire campaign outlay."

"Big Bertha ad decals, projos, the outlay," said Prim. "Right!"

"Gwen, what are you doing?" asked Battlemont. "You said yourself that —"

"You're babbling, Andre," said Gwen. She glanced up at the ceiling. An eye in one of the Cellini cupids winked at her. "We got the usual solid recordings of this conference, I presume?"

"Of course," said Battlemont. "Take those recordings, Leo,"

said Gwen. "Do a sequence out of them featuring only General Sinister Sonnet Bonnet Finnister."

"What'd you call her?" asked Prim.

GWEN explained about the Finnister nicknames. "The fashion trade knows all about her," she finished. "A living horror."

"Yeah, okay," said Prim. "A solid sequence of nothing but Finnister. What do you want it to show?"

"Every angle of that uniform," said Gwen. "And the hat. Freud! Don't forget that hat!"

Battlemont spoke plaintively. "I don't understand."

"Good," said Gwen. "Leo, send me Restivo and Jim Spark . . . a couple more of your best design people. Include yourself. We'll . . ."

"And, lo! Ben Adam's name led all the rest," said Battlemont.

Gwen turned, stared down at him. For one of the rare times in their association, Battlemont had surprised her with something he said.

I wonder if our dear Andre could be human? she mused. *No! I must be going soft in the head.* She said: "Andre, go take a meditation break until time to call our next conference. Eh? There's a good fellow."

Always before when she abused me it was like a joke between us, thought Battlemont dolefully. But now she is trying to hurt. His concern now was for Gwen, not for the agency. *My Gwen needs help. And I don't know what to do.*

"Meditation break time," said Gwen. "Or you could go to a mood bar. Why don't you try the new Interdorma mediniche? A niche in time saves the mind!"

"I prefer to remain awake for our last hours together," said Battlemont. A sob clutched at his throat. He stood up to cover the moment, drew himself to attention, fixed Gwen with a despair-

ing glare. "I feel the future crouching over us like a great beast!" He turned his back on her, strode out through his private door.

"I wonder what the devil he meant by that?" mused Gwen.

Prim said: "This is the month of St. Freud. They go for prescience, extrasensory perception, that sort of thing."

"Oh, certainly," she said. "I wrote the brochure." But she found herself disturbed by Battlemont's departure. *He looked so pitiful*, she thought. *What if this little caper backfires and he gets drafted? It could happen. Leo and the rest of these stranglers could take it. But Andre...* She gave a mental shrug. *Too late to turn back now.*

Department heads began pressing toward Gwen along the table. "Say, Gwen, what about the production on..." "If I'm going to meet any deadlines I'll need more..." "Will we have to drop our other..."

"Shaddup!" bellowed Gwen.

She smiled sweetly into the shocked silence. "I will meet with each of you privately, just as soon as I get in a fresh stock of crying towels. First things first, though. Number one problem: we get the monkey off our backs. Eh?"

And she thought: *You poor oafs! You aren't even aware how*

close you are to disaster. You think Gwen is taking over as usual. But Gwen doesn't care. Gwen doesn't give a damn any more. Gwen is resigning in a blaze of glory! Into the valley of death rode the 600! Or was it 400? No matter. War is hell! I only regret that I have but one life to give for my agency. Give me liberty or give me to the WOMS.

Leo Prim said: "You're going for the throat on these two military types, is that it?"

"Military tactics," said Gwen. "No survivors! Take no prisoners! Death to the White Eyes!"

"Huh?" said Prim.

"Get right on that assignment I gave you," she said.

"Uhh..." Prim looked down at the folder Owling had left. "Workups on this Big Bertha thing'... a solido on Finnister. Okay." He shook his head. "You know, this business could shape up into a Complete Flap."

"It could be worse than that," Gwen cautioned.

Someone else said: "It's absolutely the worst I've ever seen. Drafted!"

And Gwen thought: *Ooooh! Someone has trepidations!* Abruptly, she said: "Absolutely worst flap." She brightened. "That's wonderful! One moment, all you lovely people."

There was sudden stillness in the preparations for departure.

"It has been moved that we label this business the Absolutely Worst Flap," she said.

Chuckles from the staff.

"You will note," said Gwen, "that the initials A-W-F are the first three letters in the word awful."

Laughter.

"Up to now," said Gwen, "we've only had to contend with Minor, Medium and Complete Flaps. Now I give you the AWF! It rhymes with the grunt of someone being slugged in the stomach!"

Into the laughter that filled the room, Prim said: "How about the U and L in awful? Can't let them go to waste."

"UnLimited!" snapped Gwen. "Absolutely Worst Flap UnLimited!" She began to laugh, had to choke it off as the laughter edged into hysteria. *Whatinell's wrong with me?* she wondered. She glared at Prim. "Let's get cracking, men! Isn't a damn one of you would look good in uniform."

The laughter shaded down into nervous gutterings. "That Gwen!"

Gwen had to get out of there. It was like a feeling of nausea. She pushed her way down the side of the room. The sparkle had gone out of her rebellion. She felt that all of these people were pulling at her, taking bits of her-

self that she could never recapture. It made her angry. She wanted to kick, bite, claw. Instead, she smiled fixedly. "Excuse me. May I get through here? Sorry. Thank you. Excuse me."

And an image of Andre Battlemont kept intruding on her consciousness. *Such a pitiful little fellow. So... well... sweet. Dammit! Sweet! In a despicable sort of way.*

TWENTY-FIVE days slipped off the calendar. Twenty-five days of splashing in a pool of confusion. Gwen's element. She hurled herself into the problem. This one had to be just right. A tagline for her exit. A Gwen Everest signature at the bottom of the page.

Technical experts from the military swarmed all through the agency. Experts on suit articulation. Experts on shielding. Pressure coefficients. Artificial atmosphere. Waste reclamation. Subminiature power elements. A locksmith. An expert on the new mutable plastics. (*He had to be flown in from the West Coast.*)

Plus the fashion experts seen only by Gwen.

It was quite a job making sure that each military expert saw only what his small technical world required.

Came the day of the Big Picture. The very morning.

Adjacent to her office Gwen maintained a special room about 20 feet square. She called it "my intimidation room." It was almost Louis XV: insubstantial chairs, teetery little tables, glass gimcracks on the light fixtures, pastel cherubs on the wall panels.

The chairs looked as though they might smash flat under the weight of a medium-sized man. Each (with the exception of a padded throne chair that slid from behind a wall panel for Gwen) had a seat that canted forward. The sitters kept sliding off, gently, imperceptibly.

None of the tables had a top large enough for a note pad and an ashtray. One of these items had to be balanced in the lap or placed underfoot. That forced an occasional look at the carpet.

The carpet had been produced with alarming psychological triggers. The uninitiated felt that they were standing upside down in a fishbowl.

General Owling occupied one of the trick chairs. He tried to keep from staring at the cherub centered in a wall panel directly across from him, slightly to the right of the seated figure of Andre Battlemont. Battlemont looked ill. Owling pushed himself backward in the chair. His knees felt exposed. He glanced at General Finnister. She sat to his right beyond a spindly table. She

pulled her skirt down as he watched. He wondered why she sat so far forward on the chair.

Damned uncomfortable little chairs!

He noted that Battlemont had brought in one of the big conference room chairs for himself. Owling wondered why they all couldn't have those big, square, solid, secure chairs. For that matter, why wasn't this meeting being held in the big conference room? Full staff. The Big Picture! He glanced up at the wall panel opposite. *Stupid damned cherub!* He looked down at the rug, grimaced, tore his gaze away.

Finnister had looked at the rug when she came into the room, had almost lost her balance. Now, she tried to keep her attention off it. Her mind seethed with disquieting rumors. Individual reports from the technical experts failed to reveal a total image. It was like a jigsaw puzzle with pieces from separate puzzles all thrown together. She pushed herself backward in the chair. *What an uncomfortable room.* Intuition told her the place was subtly deliberate. Her latent anger at Gwen Everest flared. *Where is that woman?*

Battlemont cleared his throat, glanced at the door to his right through which Gwen was expected momentarily. *Must she always be late?* Gwen had avoided

him for weeks. Too busy. Suddenly this morning she had to have Andre Battlemont front and center. A figurehead. A prop for her little show. He knew pretty much what she was doing, too. In the outward, physical sense. She might be able to keep things from some of the people around here, but Andre Battlemont ran his own intelligence system. As to what was going on in her mind, though, he couldn't be sure. All he knew was that it didn't fit. Not even for Gwen.

Finnister said: "Our technical people inform us that you've been pretty interested —" she pushed herself back in the chair — "in the characteristics of some of the newer mutable plastics."

"That is true," said Battlemont.

"Why?" asked Owling.

"Ahhh, perhaps we'd better wait for Miss Everest," said Battlemont. "She is bringing a solido projector."

"You have mockups already?" asked Owling.

"Yes."

"Good! How many models?"

"One. Our receptionist. Beautiful girl."

"What?" Finnister and Owling in unison.

"Oh! You mean . . . that is, we have the one to show you. It is really two . . . but only one of . . ." He shrugged, suppressed a shudder.

Finnister and Owling looked at each other.

BATTELMONT closed his eyes. *Gwen, please hurry.* He thought about her solution to the military problem, began to tremble. Her basic idea was sound, of course. Good psychological roots. But the military would never go for it. Especially that female general who walked like a sergeant. Battlemont's eyes snapped open as he heard a door open.

Gwen came in pushing a portable display projector. A glance of mutual dislike passed between Gwen and Finnister, was masked by mutual bright smiles immediately.

"Good morning, everybody," chirped Gwen.

Danger signal! thought Battlemont. *She's mad! She's . . .* He stopped the thought, focused on it. *Maybe she is. We work her so hard.*

"Anxious to see what you have there," said Owling. "Just getting ready to ask for a progress report when you called this meeting."

"We wanted to have something first that you could appreciate as an engineer," said Gwen.

Owling nodded.

Finnister said: "Our people report that you've been very secretive about your work. Why?"

"The very walls have ears. Loose lips lose the Peace! Don't

be half safe!" Gwen positioned the projector in the center of the room, took the remote control, crossed to a panel which swung out to disgorge her chair. She sat down facing Finnister and Owling.

Seconds dragged past while she stared in fascination at Finnister's knees.

"Gwen?" said Battlemont.

Finnister tugged down on the hem of her skirt.

"What do you have to show us?" demanded Owling. He pushed himself back in the chair.

"First," said Gwen, "let us examine the perimeters of the problem. You must ask yourself: What do young women want when they enter the service?"

"Sounds sensible," said Owling.

Finnister nodded, her dislike of Gwen submerged in attention to the words.

"They want several things," said Gwen. "They want travel . . . adventure . . . the knight errant sort of thing. Tally-ho!"

Battlemont, Finnister and Owling snapped to shocked attention.

"Gives you pause when you think about it," murmured Gwen. "All those women looking for something. Looking for the free ride. The brass ring. The pot at the end of the rainbow."

She had them nodding again, Gwen noted. She raised her voice:

"The old carousel! The jingle-dingle joy journey!"

Battlemont looked at her sadly. *Mad. Ohhh, my poor, poor Gwenny.*

Owling said: "I . . . uh . . ."

"But they all want one commodity!" snapped Gwen. "And what's that? Romance! That's what's that. And in the unconscious mind what's that romance? That romance is sex!"

"I believe I've heard enough," said Finnister.

"No," said Owling. "Let's . . . uh . . . this is all, I'm sure, preliminary. I want to know where . . . after all, the model . . . models they've developed . . ."

"What's with sex when you get all the folderol off it?" demanded Gwen. "The psychological roots. What's down there?"

Owling scratched his throat, stared at her. He had a basic distrust of subjective ideas, but he always came smack up against the fear that maybe (just maybe now) they were correct. Some of them appeared (and it could be appearance only) to work.

"I'll tell you what's down there," muttered Gwen. "Motherhood. Home. Security with a man. The flag."

Owling thought: *It all sounds so sensible . . . except . . .*

"And what does your armor do?" asked Gwen. "Armor equals no amour! They're locked up in

desexed chunks of metal and plastic where no men can get at them. Great Freud! Men can't even see them in there!"

"Women don't really want men to get at them!" barked Finnister. "Of all the disgusting ideas I've ever —"

"Just a minute!" said Gwen. "A normal woman always wants the possibility. That's what she wants. And she wants it under her control. You've eliminated the possibility. You've taken all control out of their hands, put your women at the mercy of the elements, separated from cold, masculine, angular **ABRUPT AND FINAL DEATH!** by only a thin layer of plastic and metal."

Battlemont stared at her helplessly. *Poor Gwen. Doomed. And she won't even sell this idea. We're all doomed with her.*

FINNISTER glared at Gwen, still smarting under the implied dig of the word *normal*.

"How do you propose to get around these, ah, objections?" asked Owling.

"You'll see," said Gwen. "Let's go in from the perimeter now. Remember, the basic female idea is to be able to run away with the assurance that she will be caught. She wants a certain amount of exposure as a female without being too bare-ahhh-faced about it."

"Mmmmmph!" said Finnister.

Gwen smiled at her.

Gwen is deliberately destroying herself and us with her, thought Battlemont.

"Do you see what is lacking?" asked Gwen.

"Hmmm-ahhhhh-hmmmm," said Owling.

"A universal symbol," said Gwen. "A bold symbol. A symbol!"

"What do you propose?" asked Owling.

"That's it!" said Gwen. "A proposal! Plus —" she hesitated — "the symbol! The key is very simple." She sat up, perky, grinning at them. "In fact, it's a key!"

Finnister and Owling spoke in unison: "A key?"

"Yes. Two keys, actually. Symbolism's obvious." She produced two keys from her jacket pocket, held them up. "As you can see, one key is hard, angular . . . a masculine key. The other has fancy curves. It's daintier, more the . . ."

"Do you mean to tell me," howled Owling, "that you people have spent all these weeks, all those consultations with our experts, and come up with . . . with . . . with . . ." He pointed, unable to continue.

Gwen shook her head from side to side. "Oh, no. Remember, these are just symbols. They're important, of course. One might even say they were vital. Each

key will be inscribed with the name of the person who gets it."

"What are they keys to?" asked Finnister. She was fascinated in spite of herself.

"To the space armor, naturally," said Gwen. "These keys lock your people in their armor — both men *and* women."

"Lock them?" protested Finnister. "But you said . . ."

"I know," said Gwen. "But, you see, a key that will lock people into something will also let them out. As a matter of fact, any one of these keys will open any suit. That's for the safety factor."

"But they can't get out of their suits when they're in space!" howled Owling. "Of all the . . ."

"That's right!" said Gwen. "They can't *really* get out. So we give them the *symbol* of getting out. For exchanging."

"Exchanging?" asked Finnister.

"Certainly. A male astronaut sees a girl astronaut he likes. He asks her to trade keys. Very romantic. Symbolic of things that may happen when they return to Earth or get to a base where they can get out of the suits."

"Miss Everest," said Finnister, "as you so aptly pointed out earlier, no astronaut can see one of our women in this armor. And even if he could, I don't believe that I'd . . ."

She froze, staring, shocked speechless.

Gwen had pushed a stud on the solido projector's remote control. A suit of space armor appeared to be hanging in the center of the room. In the suit, wearing a form-fitting jacket, stood the agency's busty receptionist. The suit of armor around her was transparent from the waist up.

"The bottom half remains opaque at all times," said Gwen. "For reasons of modesty . . . the connections. However, the top half . . ."

Gwen pushed another stud. The transparent upper half faded through gray to black until it concealed the model.

"For privacy when desired," said Gwen. "That's how we've used the new mutable plastic. Gives the girl some control over her environment."

Again, Gwen pushed the first stud. The upper half of the model reappeared.

Finnister gaped at the form-fitting uniform.

Gwen stood up, took a pointer, gestured in through the projection. "This uniform was designed by a leading couturier. It is made to reveal while concealing. A woman with only a fair figure will appear to good advantage in it. A woman with an excellent figure appears stunning, as you can see. Poor figures —" Gwen shrugged — "there *are* exercises



for developing them. Or so I am told."

Finnister interrupted in a cold voice. "And what do you propose to do with that . . . that uni . . . clothing?"

"This will be the regulation uniform for the WOMS," said Gwen. "There's a cute little hat goes with it. Very sexy."

Battlemont said: "Perhaps the changeover could be made slowly so as to . . ."

"What changeover?" demanded Finnister. She leaped to her feet. "General Owling?"

Owling tore his attention from the model. "Yes?"

"Completely impractical! I will put up with no more!" barked Finnister.

Battlemont thought: *I knew it. Oh, my poor Gwenny! They will destroy her, too. I knew it.*

"We can't waste any more time with this agency," said Finnister. "Come, General."

"Wait!" yelled Battlemont. He leaped to his feet. "Gwen, I told you . . ."

Finnister said: "It's regrettable, but . . ."

"Perhaps we're being a little hasty," said Owling. "There may be something to salvage from this. . ."

"Yes!" said Battlemont. "Just a little more time is all we need to get a fresh . . ."

"I think not," said Finnister.

GWEN smiled from one to the other, thought: *What a prize lot of gooney birds!* She felt a little drunk, as euphoric as if she had just come from a mood bar. *Rebellion, it's wonderful! Up the Irish! Or something.*

Owling shrugged, thought: *We have to stand together against civilians. General Finnister is right. Too bad, though. He got to his feet.*

"Just a little more time," pleaded Battlemont.

Too bad about Andre, thought Gwen. She had an inspiration, said: "One moment, please."

Three pairs of eyes focused on her.

Finnister said: "If you think you can stop me from going through with our threat, dissuade yourself. I'm perfectly aware that you had that uni . . . that clothing designed to make me look hideous!"

"Why not?" asked Gwen. "I was only doing to you what you did to virtually every other woman in the WOMS."

"Gwen!" pleaded Battlemont in horror.

"Be still, Andre," said Gwen. "It's just a matter of timing, anyway. Today. Tomorrow. Next week. Not really important."

"Oh, my poor Gwenny," sobbed Battlemont.

"I was going to wait," said Gwen. "Possibly a week. At least

until I'd turned in my resignation."

"What're you talking about?" asked Owling.

"Resignation!" gasped Battlemont.

"I just can't toss poor Andre here to the wolves," said Gwen. "The rest of our men, yes. Once they get inside they'll chew your guts out, anyway."

"What are you talking about?" asked Finnister.

"The rest of the men in this agency can take care of themselves . . . and you, too," said Gwen. "Wolves among wolves. But Andre here is helpless. All he has is his position . . . money. He's an accident. Put him someplace where money and position are less important, it'll kill him."

"Regrettable," said Finnister. "Shall we be going, General Owling?"

"I was going to ruin both of you," said Gwen. "But I'll tell you what. You leave Andre alone and I'll just give one of you the business."

"Gwen, what are you saying?" whispered Battlemont.

"Yess!" hissed Finnister. "Explain yourself!"

"I just want to know the pecking order here," said Gwen. "Which one of you ranks the other?"

"What does that have to do with it?" asked Finnister.

"Just a minute," said Owling. "That intelligence report." He glared at Gwen. "I'm told you've prepared an adecal on the test model we made before coming to you."

"Big Bertha," said Gwen. "And it's not just an adecal. I have everything needed for a full national campaign. Look!"

A solido of the breast-bearing test model replaced the transparent suit hanging in the center of the room.

"The idea for Big Bertha here originated with General Owling," said Gwen. "My campaign establishes that fact, then goes on to feature an animated model of Big Bertha. She is a living panic. Funniest thing you ever saw. General Owling, you will be the laughing stock of the nation by nightfall of the day I start this campaign."

Owling took a step forward. Battlemont said: "Gwen! They will destroy you!"

Owling pointed at the projection. "You . . . you wouldn't!"

"But I would," said Gwen. She smiled at him.

Battlemont tugged at Gwen's arm. She shook him off.

"It would ruin me," whispered Owling.

"Presumably, you are capable of going through with this threat," said Finnister. "Regrettable."

Owling whirled on Finnister.

"We must stand together!" he said desperately.

"You bet," said Gwen. She pushed another stud on the remote control.

A projection of General Finnister in her famous uniform replaced Big Bertha.

"You may as well know the whole story," said Gwen. "I'm all set with another campaign on the designing of this uniform, right from the Sonnet Bonnet on down through the Sinister Finnister cape and those sneaky walking shoes. I start with a dummy model of the general clad in basic foundation garments. Then I go on to show how each element of the present WOMS uniform was designed for the . . . ah . . . Finnister . . . ah . . . figure."

"I'll sue!" barked Finnister.

"Go ahead. Go ahead," Gwen waved a sinuous arm.

She acts drunk! thought Battlemont. *But she never drinks.*

"I'm all set to go black market with these campaigns," said Gwen. "You can't stop me. I'll prove every contention I make about that uniform. I'll expose you. I'll show why your enlistment drives flopped."

RED suffused the Finnister face. "All right!" she snapped. "If you're going to ruin us, I guess there's nothing we can do

about it. But mark this, Miss Everest. We'll have the men of this agency in the service. You'll have that on your conscience! And the men we draft will serve under friends of ours. I hope you know what that means!"

"You don't have any friends," said Gwen, but her voice lacked conviction. *It's backfiring, she thought. Oh, hell. I didn't think they'd defy me.*

"There may even be something we can do about you!" said Finnister. "A presidential order putting you in the service for reasons of national emergency. Or an emergency clause on some bill. And when we get our hands on you, Miss Everest . . ."

"Andre!" wailed Gwen. It was all getting out of hand. *I didn't want to hurt anybody, she thought. I just . . .* She realized that she didn't know what she had wanted.

Battlemont was electrified. In 22 years, Gwen Everest had never appealed to anyone for help. And now, for the first time, her appeal was to him! He stepped between Gwen and Finnister. "Andre is right here," he said. He felt inspired. His Gwen had appealed to him! "You assassin!" he said, shaking a finger under the Finnister nose.

"Now, see here!" snapped Owling. "I won't stand for any more of —"

"And you!" barked Battlemont, whirling. "We have recordings of every conference here, from the first, and including this one! They show what happened! Don't you know what is wrong with this poor girl? You! You've driven her out of her mind!"

Gwen joined in the chorus: "What?"

"Be still, Gwen," said Battlemont. "I will handle this."

Gwen couldn't take her attention off him. Battlemont was magnificent. "Yes, Andre."

"I will prove it," said Battlemont. "With Interdorma psychiatrists. With all the experts money can buy. You think you have seen something in those campaigns our Gwen set up? Hah! I will show you something." He stabbed a finger at Owling. "Can the military drive you insane?"

"Oh, now see here," said Owling. "This has gone —"

"Yes! It can drive you insane!" said Battlemont. "And we will show, step by step, how you drove our poor Gwen out of her mind with fear for her friends. Fear for me!" He slapped himself on the chest, glared at Finnister. "And you know what we will do next? We will say to the public: This could happen to you! Who is next? You? Or you? Or you? Then what happens to your money from Congress? What

happens to your enlistment quotas?"

"Now see here," said Owling.

"We didn't . . ."

"Didn't you?" snarled Battlemont. "You think this poor girl is in her right mind?"

"Well, but we didn't . . ."

"Wait until you see our campaign," said Battlemont. He took Gwen's hand, patted it. "There, there, Gwenny. Andre will fix."

"Yes, Andre," she said. They were the only words she could find. She felt stupified. *He's in love with me, she thought. Never before had she known anyone to be in love with her. Not even her parents, who had always been repelled by the intellect they had spawned. Gwen felt warmth seeping through her. A cog slipped into motion in her mind. It creaked somewhat from long idleness. She thought: He's in love with me! She wanted to hug him.*

"We seem to be at a stalemate," muttered Owling.

Finnister said: "But we can't just —"

"Shut up!" ordered Owling. "He'll do it! Can't you see that?"

"But if we draft —"

"He'll do it for sure, then! Buy some other agency to run the campaign."

"But we could turn around and draft —"

"You can't draft everybody who disagrees with you, woman!

Not in this country! You'd start a revolution!"

"I . . ." Finnister said helplessly.

"And it's not just us he'd ruin," said Owling. "The whole service. He'd strike right at the money. I know his type. He wasn't bluffing. It'd be catastrophic!"

OWLING shook his head, seeing a parade of crumbling military projects pass before his mind's eye, all falling into an abyss labeled "NSF."

"You are an intelligent man, General Owling," said Battlemont.

"That Psych Branch!" snarled Owling. "Them and their bright ideas!"

"I told you they were fuzzy-heads," said Gwen.

"You be still, Gwen," said Battlemont.

"Yes, Andre."

"Well, what're we going to do?" demanded Owling.

"I tell you what," said Battlemont. "You leave us alone, we leave you alone."

"But what about my enlistments?" wailed Finnister.

"You think our Gwen, sick or well, can't solve your problems?" asked Battlemont. "For your enlistments you use the program as outlined."

"I won't!"

"You will," said Owling.

"General Owling, I refuse to have. . ."

"What happens if I have to dump this problem on the General Staff?" asked Owling. "Where will the head-chopping start? In the Psych Branch? Certainly. Who'll be next? The people who could've solved it in the field, that's who!"

Finnister said: "But —"

"For that matter," said Owling, "Miss Everest's ideas sounded pretty sensible . . . with some modifications, of course."

"No modifications," said Battlemont.

He's a veritable Napoleon! thought Gwen.

"Only in minor, unimportant details," soothed Owling. "For engineering reasons."

"Perhaps," agreed Battlemont. "Provided we pass on the modifications before they are made."

"I'm sure we can work it out," said Owling.

Finnister gave up, turned her back on them.

"One little detail," murmured Battlemont. "When you make out the double-fee check to the agency, make a substantial addition — bonus for Miss Everest."

"Naturally," said Owling.

"Naturally," said Battlemont.

When the space brass had departed, Battlemont faced Gwen, stamped his foot. "You have been very bad, Gwen!"

"But, Andre —"

"Resignation!" barked Battlemont.

"But —"

"Oh, I understand, Gwen. It's my fault. I worked you much too hard. But that is past."

"Andre, you don't —"

"Yes, I do! I understand. You were going to sink the ship and go down with it. My poor, dear Gwen. A death wish! If you'd only paid attention to your *Interdorma* telelog."

"I didn't want to hurt anyone here, Andre. Only those two —"

"Yes, yes. I know. You're all mixed up."

"That's true." She felt like crying. She hadn't cried . . . since . . . she couldn't remember when. "You know," she said, "I can't remember ever crying."

"That's it!" said Battlemont. "I cry all the time. You need a stabilizing influence. You need someone to teach you how to cry."

"Would you teach me, Andre?"

"Would I . . ." He wiped the tears from his eyes. "You are going on a vacation. Immediately! I am going with you."

"Yes, Andre."

"And when we return —"

"I don't want to come back to the agency, Andre. I . . . can't."

"So that's it!" said Battlemont. "The advertising business! It bugs you!"

SHE shrugged. "I'm . . . I just can't face another campaign. I . . . just . . . can't."

"You will write a book," announced Battlemont.

"What?"

"Best therapy known," said Battlemont. "Did it myself once. You will write about the advertising business. You will expose all the dirty tricks: the hypno-jingles, the subvisual flicker images, the advertisers who finance textbooks to get their sell into them, the womb rooms where the *you-seekers* are programmed. Everything."

"I could do it," she said.

"You will tell all," said Battlemont.

"Will I!"

"And you will do it under a pseudonym," said Battlemont. "Safer."

"When do we start the vacation, Andre?"

"Tomorrow." He experienced a moment of his old panic. "You don't mind that I'm . . . ugly as a pig?"

"You're just beautiful," she said. She smoothed the hair across his bald spot. "You don't mind that I'm smarter than you?"

"Ah, hah!" Battlemont drew himself to attention. "You may be smarter in the head, my darling, but you are *not* smarter in the heart!"

— FRANK HERBERT



THE LONG WAY HOME

*It's a long way home from
outer space — especially
if you have to walk it!*

WHEN Marty first saw the thing it was nearly dead ahead, half a million miles away, a tiny green blip that repeated itself every five seconds on the screen of his distant search radar.

He was four billion miles from Sol and heading out, working his way slowly through a small swarm of rock chunks that swung in a slow sun-orbit out here beyond Pluto, looking for valuable minerals in a concentration that would make mining profitable.

By FRED SABERHAGEN Illustrated by IVIE

The thing on his radar screen looked quite small and therefore not too promising. But, as it was almost in his path, no great effort would be required to investigate. For all he knew, it might be solid germanium. And nothing better was in sight at the moment.

Marty leaned back in the control seat and said: "We've got one coming up, baby." He had no need to address himself any more exactly. Only one other human was aboard the *Clementine*, or, to his knowledge, within

the better part of a couple of billion miles.

Laura's voice answered through a speaker, from the kitchen two decks below.

"Oh, close? Have we got time for breakfast?"

Marty studied the radar. "About five hours if we maintain speed. Hope it won't be a waste of energy to decelerate and look the thing over." He gave *Clem's* main computer the problem of finding the most economical engine use to approach his find and reach zero velocity relative to it.

"Come and eat!"

"All right." He and the computer studied the blip together for a few seconds. Then the man, not considering it anything of particular importance, left the control room to have breakfast with his bride of three months. As he walked downstairs in the steadily-maintained artificial gravity, he heard the engines starting.

TEN hours later he examined his new find much more closely, with a rapidly focusing alertness that balanced between an explorer's caution and a prospector's elation at a possibly huge strike.

The incredible shape of X, becoming apparent as the *Clem* drew within a few hundred

miles, was what had Marty on the edge of his chair. It was a needle thirty miles long, as near as his radar could measure, and about a hundred yards thick — dimensions that matched exactly nothing Marty could expect to find anywhere in space.

It was obviously no random chunk of rock. And it was no spaceship that he had ever seen or heard of. One end of it pointed in the direction of Sol, causing him to suggest to Laura the idea of a miniature comet, complete with tail. She took him seriously at first, then remembered some facts about comets and swatted him playfully. "Oh, you!" she said.

Another, more real possibility quickly became obvious, with sobering effect. The ancient fear of the Alien that had haunted Earthmen through almost three thousand years of intermittent space exploration, that had never been realized, now peered into the snug control room through the green radar eye.

Aliens were always good for a joke when spacemen met and talked. But they turned out to be not particularly amusing when you were possibly confronting them, several billion miles from Earth. Especially, thought Marty, in a ship built for robot mining, ore refining, and hauling, not for diplomatic

contacts or heroics. And with the only human assistance a girl on her first space trip, Marty hardly felt up to speaking for the human race in such a situation.

It took a minute to set the autopilot so that any sudden move by X would trigger alarms and such evasive tactics as *Clem* could manage. He then set a robot librarian to searching his microfilm files for any reference to a spaceship having X's incredible dimensions.

There was a chance — how good a chance he found hard to estimate, when any explanation looked somewhat wild — that X was a derelict, the wrecked hull of some ship dead for a decade, or a century, or a thousand years. By laws of salvage, such a find would belong to him if he towed it into port. The value might be very high or very low. But the prospect was certainly intriguing.

Marty brought *Clem* to a stop relative to X, and noticed that his velocity relative to Sol now also hung at zero. "I wonder," he muttered. "Space anchor. . .?"

The space anchor had been in use for thousands of years. It was a device that enabled a ship to fasten itself to a particular point in the gravitational field of a massive body such as a sun. If X was anchored, it did not prove that there was still life aboard

her; once "dropped," an anchor could hold as long as a hull could last.

Laura brought sandwiches and a hot drink to him in the control room.

"If we call the Navy and they bring it in we won't get anything out of it," he told her between bites. "That's assuming it's — not alien."

"Could there be someone alive on it?" She was staring into the screen. Her face was solemn but, he thought, not frightened.

"If it's human, you mean? No. I *know* there hasn't been any ship remotely like that used in recent years. Way, way back the Old Empire built some that were even bigger, but none I ever heard of with this crazy shape. . . ."

The robot librarian indicated that it had drawn a blank. "See?" said Marty. "And I've even got most of the ancient types in there."

There was silence for a little while. The evening's recorded music started somewhere in the background.

"What would you do if I weren't along?" Laura asked him.

He did not answer directly, but said something he had been considering. "I don't know the psychology of our hypothetical aliens. But it seems to me that

if you set out exploring new solar systems, you do as Earthmen have always done — go with the best you have in the way of speed and weapons. Therefore if X is alien I don't think *Clem* would stand a chance, trying to fight or run." He paused, frowned at the image of X. "That damned shape — it's just not right for anything."

"We could call the Navy — not that I'm saying we should, darling," she added hastily. "You decide, and I'll never complain either way. I'm just trying to help you think it out."

He looked at her, believed it about there never being any complaints and squeezed her hand. Anything more seemed superfluous.

"If I was alone," he said, "I'd jump into a suit, go look that thing over, haul it back to Gany-mede and sell it for a unique whatever-it-is. Maybe I'd make enough money to marry you in real style, and trade in *Clem* for a first-rate ship — or maybe even terraform an asteroid and keep a couple of robot prospectors. I don't know, though. Maybe we'd better call the Navy."

She stood up and laughed at him gently. "We're married enough already, and we had all the style I wanted. Besides, I don't think either of us would be happy sitting on an asteroid very

long. How long do you think it will take you to look it over?"

At the airlock door she had misgivings: "Oh, it is safe enough, isn't it? Marty, be careful and come back soon." She kissed him before he closed his helmet.

They had moved *Clem* to within a few miles of X. Marty mounted his spacebike and approached it slowly, from the side.

The vast length of X blotted out a thin strip of stars to his right and left, as if it were the distant shore of some vast island in a placid Terran sea, and the starclouds below him were watery reflections of the ones above. But space was too black to permit such an illusion to endure.

The tiny FM radar on his bike showed him within three hundred yards of X. He killed his forward speed with a gentle application of retrojets and turned on a spotlight. Bright metal gleamed smoothly back at him as he swung the beam from side to side. Then he stopped it where a dark concavity showed up.

"Lifeboat berth . . . empty," he said aloud, looking through the bike's little telescope.

"Then it is a derelict? We're all right?" asked Laura's voice in his helmet.

"Looks that way, yeah, I guess there's no doubt of it. I'll go in for a closer look now." He eased

the bike forward. X was evidently just some rare type of ship that neither he nor the compilers of the standard reference works in his library had ever heard of. Which sounded a little foolish to him, but . . .

At ten yards distance he killed speed again, set the bike on automatic stay-clear, made sure a line from it was fast to his belt and launched himself out of the saddle gently, headfirst toward X.

The armored hands of his suit touched down first, easily and expertly. In a moment he was standing upright on the hull, held in place by magnetic boots. He looked around. He detected no response to his arrival.

Marty turned toward Sol, sighting down the miles of dark cylinder that seemingly dwindled to a point in the starry distance, like a road on which a man might travel home toward a tiny sun.

Near at hand the hull was smooth, looking like that of any ordinary spaceship. In the direction away from Sol, quite distant, he could vaguely see some sort of projections at right angles to the hull. He mounted his bike again and set off in that direction. When he neared the nearest projection, a mile down the hull, he saw it to be a sort of enormous clamp that encircled X — or rather, part of a clamp. It ended

a few yards from the hull, in rounded globs of metal that had once been molten but were now too cold to affect the thermometer Marty held against them. His radiation counter showed nothing above the normal background.

"Ah," said Marty after a moment, looking at the half-clamp. "Something?"

"I think I've got it figured out. Not quite as weird as we thought. Let me check for one thing more." He steered the bike slowly around the circumference of X.

A third of the way around he came upon what looked like a shallow trench, about five feet wide and a foot deep, with a bottom that shone cloudy gray in his lights. It ran lengthwise on X as far as he could see in either direction.

A door-sized opening was cut in the clamp above the trench.

Marty nodded and smiled to himself, and gunned the bike around in an accelerating curve that aimed at the *Clementine*.

"It's not a spaceship at all, only a part of one," he told Laura a little later, digging in the microfilm film with his own hands, with the air of a man who knew what he was looking for. "That's why the librarian didn't turn it up. Now I remember read-

ing about them. It's part of an Old Empire job of about two thousand years ago. They used a somewhat different drive than we do, one that made one enormous ship more economical to run than several normal sized ones. They made these ships ready for a voyage by fastening together a number of long narrow sections side by side, how many depending on how much cargo they had to move. What we've found is obviously one of those sections."

Laura wrinkled her forehead. "It must have been a terrible job, putting those sections together and separating them, even in free space."

"They used space anchors. That trench I mentioned? It has a forcefield bottom, so an anchor could be sunk through it; then the whole section could be slid straight forward or back, in or out of the bunch . . . here, I've got it, I think. Put this strip in the viewer."

One picture, a photograph, showed what appeared to be one end of a bundle of long needles, in a glaring light, against a background of stars that looked unreal. The legend beneath gave a scanty description of the ship in flowing Old Empire script. Other pictures showed sections of the ship in some detail.

"This must be it, all right,"

said Marty thoughtfully. "Funny looking old tub."

"I wonder what happened to wreck her."

"Drives sometimes exploded in those days, that could have done it. And this one section got anchored to Sol somehow — it's funny."

"How long ago did it happen, do you suppose?" asked Laura. She had her arms folded as if she were a little cold, though it was not cold in the Clementine.

"Must be around two thousand years or more. These ships haven't been used for about that long." He picked up a stylus. "I better go over there with a big bag of tools tomorrow and take a look inside." He noted down a few things he thought he might need.

"Historians would probably pay a good price for the whole thing, untouched," she suggested, watching him draw doodles.

"That's a thought. But maybe there's something really valuable aboard — though I won't be able to give it anything like a thorough search, of course. The thing is anchored, remember. I'll probably have to break in anyway to release that."

She pointed to one of the diagrams. "Look, a section thirty miles long must be one of the passenger compartments. And according to this plan, it would

have no drive at all of its own. We'll have to tow it."

He looked. "Right. Anyway, I don't think I'd care to try its drive if it had one."

He located airlocks on the plan and made himself generally familiar with it.

THE next "morning" found Marty loading extra tools, gadgets and explosives on his bike. The trip to X (he still thought of it that way) was uneventful. This time he landed about a third of the way from one end, where he expected to find a handy airlock and have a choice of directions to explore when he got inside. He hoped to get the airlock open without letting out whatever atmosphere or gas was present in any of the main compartments, as a sudden drop in pressure might damage something in the unknown cargo.

He found a likely-looking spot for entry where the plans had led him to expect one. It was a small auxiliary airlock, only a few feet from the space-anchor channel. The forcefield bottom of that channel was, he knew, useless as a possible doorway. Though anchors could be raised and lowered through it, they remained partly imbedded in it at all times. Starting a new hole from scratch would cause the decompression he was trying to

avoid, and possibly a dangerous explosion as well.

Marty began his attack on the airlock door cautiously, working with electronic "sounding" gear for a few minutes, trying to tell if the inner door was closed as well. He had about decided that it was when something made him look up. He raised his head and sighted down the dark length of X toward Sol.

Something was moving toward him along the hull.

He was up in the bike saddle with his hand on a blaster before he realized what it was — that moving blur that distorted the stars seen through it, like heat waves in air. Without doubt, it was a space anchor. And it moved along the channel.

Marty rode the bike out a few yards and nudged it along slowly, following the anchor. It moved at about the pace of a fast walk. Moved . . . but it was sunk into space.

"Laura," he called, "something odd here. Doppler this hull for me and see if it's moving."

Laura acknowledged in one businesslike word. Good girl, he thought, I won't have to worry about you. He coasted along the hull on the bike, staying even with the apparent movement of the anchor.

Laura's voice came: "It is moving now, towards Sol. About six

miles per hour. Maybe less — it's hard to read, so slow."

"Good, that's what I thought." He hoped he sounded reassuring. He pondered the situation. It was the hull moving then, the forcefield channel sliding by the fixed anchor. Whatever was causing it, it did not seem to be directed against him or the *Clem*. "Look, baby," he went on, "something peculiar is happening." He explained about the anchor. "*Clem* may be no battleship, but I guess she's a match for any piece of wreckage."

"But you're out *there*!"

"I have to see this. I never saw anything like it before. Don't worry, I'll pull back if it looks at all dangerous." Something in the back of his mind told him to go back to his ship and call the Navy. He ignored it without much trouble. He had never thought much of calling the Navy.

About four hours later the incomprehensible anchor neared the end of its track, within thirty yards of what seemed to be X's stern. It slowed down and came to a gradual stop a few yards from the end of the track. For a minute nothing else happened. Marty reported the facts to Laura. He sat straight in the bike saddle, regarding the universe, which offered him no enlightenment.

In the space between the anchor and the end of the track, a second patterned shimmer appeared. It must necessarily have been let "down" into space from inside X. Marty felt a creeping chill. After a little while the first anchor vanished, withdrawn through the forcefield into the hull.

Marty sat watching for twenty minutes, but nothing further happened. He realized that he had a crushing grip on the bike controls and that he was quivering with fatigue.

LAURA and Marty took turns sleeping and watching, that night aboard the *Clementine*. About noon the next day Laura was at the telescope when anchor number one reappeared, now at the "prow" of X. After a few moments the one at the stern vanished.

Marty looked at the communicator that he could use any time to call the Navy. Faster-than-light travel not being practical so near a sun, it would take them at least several hours to arrive after he decided he needed them. Then he beat his fist on the table and swore. "Must be some kind of mechanism in her still operating." He went to the telescope and watched number one anchor begin its apparent slow journey sternward once again. "I don't

know. I've got to settle this."

The doppler showed X was again creeping toward Sol at about six miles an hour.

"Does it seem likely there'd be power left after two thousand years to operate such a mechanism?" Laura asked.

"I think so. Each passenger section had a hydrogen power lamp." He dug out the microfilm again. "Yeah, a small fusion lamp for electricity to light and heat the section, and run the emergency equipment for . . ." His voice trailed off, then continued in a dazed tone: "For recycling food and water."

"Marty, what is it?"

He stood up, staring at the plan. "And the only radios were in the lifeboats, and the lifeboats are gone. I wonder . . . sure. The explosion could have torn them apart, blown them away so. . ."

"What are you talking about?"

He looked again at their communicator. "A transmitter that can get through the noise between here and Pluto wouldn't be easy to jury-rig, even now. In the Old Empire days . . ."

"What?"

"Now about air —" He seemed to wake up with a start, looked at her sheepishly. "Just an idea hit me." He grinned. "I'm making another trip."

An hour later he was landing

on X for the third time, touching down near the "stern". He was riding the moving hull toward the anchor, but it was still many miles away.

The spot he had picked was near another small auxiliary airlock, upon which he began work immediately. After ascertaining that the inner door was closed, he drilled a hole in the outer door to relieve any pressure in the chamber to keep the outer door shut.

The door opening mechanism suffered from twenty-century cramp, but a vibrator tool shook it loose enough to be operated by hand. The inside of the airlock looked like nothing more than the inside of an airlock.

HE patched the hole he had made in the outer door so he would be able — he hoped — to open the inner one normally. He operated the outer door several times to make sure he could get out fast if he had to. After attaching a few extras from the bike to his suit, he said a quick and cheerful goodbye to Laura — not expecting his radio to work from inside the hull — and closed himself into the airlock. Using the vibrator again, he was able to work the control that should let whatever passed for hull atmosphere into the chamber. It came. His wrist gauge

told him pressure was building up to approximately spaceship normal, and his suit mikes began to pick up a faint hollow humming from somewhere. He very definitely kept suit and helmet sealed.

The inner door worked perfectly, testifying to the skill of the Old Empire builders. Marty found himself nearly upside down as he went through, losing his footing and his sense of heroic adventure. In return he gained the knowledge that X's artificial gravity was still at least partly operational. Righting himself, he found he was in a small anteroom banked with spacesuit lockers, now illuminated only by his suit lights but showing no other signs of damage. There was a door in each of the other walls.

He moved to try the one at his right. First drawing his blaster, he hesitated a moment, then slid it back into its holster. Swallowing, he eased the door open to find only another empty compartment, about the size of an average room and stripped of everything down to the bare deck and bulkheads.

Another door led him into a narrow passage where a few overhead lights burned dimly. Trying to watch over his shoulder and ahead at the same time, he followed the hall to a winding stair and began to climb, moving with

all the silence possible in a spacesuit.

The stair brought him out onto a long gallery overlooking what could only be the main corridor of X, a passage twenty yards wide and three decks high; it narrowed away to a point in the dim-lit distance.

A man came out of a doorway across the corridor, a deck below Marty.

He was an old man and may have been nearsighted, for he seemed unaware of the spacesuited figure gripping a railing and staring down at him. The old man wore a sort of tunic intricately embroidered with threads of different colors, and well tailored to his thin figure, leaving his legs and feet bare. He stood for a moment peering down the long corridor, while Marty stared down momentarily frozen in shock.

Marty pulled back two slow steps from the railing, to where he stood mostly in shadow. Turning his head to follow the old man's gaze, he noticed that the forcefield where the anchors traveled was visible running in a sunken strip down the center of the corridor. When the interstellar ship of which X was once a part had been in normal use, the strip might have been covered with a moving walkway of some kind.

THE old man turned his attention to a tank where grew a mass of plants with flat, dark green leaves. He touched a leaf, then turned a valve that doled water into the tank from a thin pipe. Similar valves were clustered on the bulkhead behind the old man, and pipes ran from them to many other plant-filled tanks set at intervals down the corridor. "For oxygen," Marty said aloud in an almost calm voice, and was startled at the sound in his helmet. His helmet airspeaker was not on, so of course the old man did not hear him. The old man pulled a red berry from one of the plants and ate it absently.

Marty made a move with his chin to turn on his speaker, but did not complete it. He half lifted his arms to wave, but fear of the not-understood held him, made him back up slowly into the shadows at the rear of the gallery. Turning his head to the right he could see the near end of the corridor, and an anchor there, not sunken in space but raised almost out of the forcefield on a framework at the end of the strip.

Near the stair he had ascended was a half-open door, leading into darkness. Marty realized he had turned off his suit lights without consciously knowing it. Moving carefully so the old man would not see, he lit one and

probed the darkness beyond the door cautiously. The room he entered was the first of a small suite that had once been a passenger cabin. The furniture was simple, but it was the first of any kind that he had seen aboard X. Garments hanging in one corner were similar to the old man's tunic, although no two were alike exactly. Marty fingered the fabric with one armored hand, holding it close to his faceplate. He nodded to himself; it seemed to be the kind of stuff produced by fiber recycling machinery, and he doubted very much that it was anywhere near two thousand years old.

Marty emerged from the doorway of the little apartment, stood in shadow with his suit lights out, looking around; the old man had disappeared. He remembered that the old man had gazed down the infinite-looking corridor as if expecting something. There was nothing new in sight that way. He turned up the gain of one of his suit mikes and focused it in that direction.

Many human voices were singing, somewhere down there, miles away. He started, and tried to interpret what he heard in some other way, but with an eerie thrill became convinced that his first impression was correct. While he studied a plan of going back to his bike and heading in that di-



rection, he grew aware that the singing was getting louder. And therefore no doubt closer.

HE leaned back against the bulkhead in the shadow at the rear of the gallery. His suit, dark-colored for space work far from Sol, would be practically invisible from the lighted corridor below, while he could see down with little difficulty. Part of his mind urged him to go back to Laura, to call the Navy, that these unknown people could be dangerous to him. But he had to wait and see more of them. He grinned wryly as he realized he was not going to get any salvage out of X after all.

Sweating in spite of his suit's coolers, he listened to the singing grow rapidly louder in his helmet. Male and female voices rose and fell in an intricate melody, sometimes blending, sometimes chanting separate parts. The language was unknown to him.

Suddenly the people were in sight, first only as a faint dot of color in the distance. As they drew nearer he could see that they walked in a long neat column eight abreast, four on each side of the central strip of forcefield. Men and women, apparently teamed according to no fixed rule of age or sex or size — except that he saw no oldsters or young children.

The people sang and leaned forward as they walked, pulling their weight on heavy ropes that were intricately decorated, like their clothing and that of the old man who had now stepped out of his doorway again to greet them. A few other oldsters of both sexes appeared near him to stand and wait. Through a briefly opened door Marty caught a glimpse of a well-lighted room holding machines he recognized as looms only because of the half-finished cloth they held. He shook his head wonderingly.

All at once the walkers were very near; hundreds of people pulling on ropes that led to a multiple whiffletree made of twisted metal pipe, that rode over the central trench. The whiffletree and the space anchor to which it was fastened were pulled past Marty — or rather the spot from which he watched was carried past the fixed anchor by the slow, human-powered thrust of X toward Sol.

Behind the anchor came a small group of children, from about the age of ten up to puberty. They pulled on small ropes, drawing a cart that held what looked like containers for food and water. At the extreme rear of the procession marched a man in the prime of life, tall and athletic, wearing a magnificent head-dress.

ABOUT the time he drew even with Marty, this man stopped suddenly (young and old alike walked steadily at the same fast pace) and uttered a sharp command. Instantly the pulling and singing ceased. Several men nearest the whiffletree moved in and loosed it from the anchor with quick precision. Others held the slackened ropes clear as the enormous inertia of X's mass carried the end of the forcefield strip toward the anchor, which now jammed against the framework holding anchor number two, forcing the framework back where there had seemed to be no room.

A thick forcefield pad now became visible to Marty behind the framework, expanding steadily as it absorbed the energy of the powerful stress between ship and anchor. Conduits of some kind, Marty saw, led away from the pad, possibly to where energy might be stored for use when it came time to start X creeping toward the sun again. A woman in a headdress now mounted the framework and released anchor number two, to drop into space "below" the hull and bind X fast to the place where it was now held by anchor number one. A crew of men came forward and began to raise anchor number one . . .

He found himself descending

the stair, retracing his steps to the airlock. Behind him the voices of the people were raised in a steady recitation that might have been a prayer. Feeling somewhat as if he moved in a dream, he made no particular attempt at caution, but he met no one. He tried to think, to understand what he had witnessed. Vaguely, comprehension came.

Outside, he said: "I'm out all right, Laura. I want to look at something at the other end and I'll come home." He scarcely heard what she said in reply, but realized that her answer had been almost instantaneous; she must have been listening steadily for his call all the time. He felt better.

The bike shot him thirty miles down the dream-like length of X toward Sol in a few minutes. A lot faster than the people inside do their traveling, he thought . . . and Sol was dim ahead.

Almost recklessly he broke into X again, through an airlock near the prow. At this end of the forcefield strip hung a gigantic block and tackle that would give a vast mechanical advantage to a few hundred people pulling against an anchor, when it came time for them to start the massive hull moving toward Sol once more.

He looked in almost unnoticed at a nursery, small children in the care of a few women. He

thought one of the babies saw him and laughed at him as he watched through a hole in a bulkhead where a conduit had once passed.

"WHAT is it?" asked Laura impatiently as he stepped exhausted out of the shower room aboard the *Clem*, wrapping a robe around him. He could see his shock suddenly mirrored in her face.

"People," he said, sitting down. "Alive over there. Earth people. Humans."

"You're all right?"

"Sure. It's just — God!" He told her about it briefly. "They must be descended from the survivors of the accident, whatever it was. Physically there's no reason why they couldn't live when you come to think of it — even reproduce up to a limited number. Plants for oxygen — I bet their air's as good as ours. Recycling equipment for food and water, and the hydrogen power lamp still working to run it, and to give them light and gravity . . . they have about everything they need. Everything but a space-drive." He leaned back with a sigh and closed his eyes. It was hard for him to stop talking to her.

She was silent for a little, trying to assimilate it all. "But if they have hydrogen power

couldn't they have rigged something?" she finally asked. "Some kind of a drive, even if it was slow? Just one push and they'd keep moving."

Marty thought it over. "Moving a little faster won't help them." He sat up and opened his eyes again. "And they'd have a lot less work to do every day. I imagine too large a dose of leisure time could be fatal to all of them."

"Somehow they had the will to keep going, and the intelligence to find a way, to evolve a system of life that worked for them, that kept them from going wild and killing each other. And their children, and their grandchildren, and after that . . ." Slowly he stood up. She followed him into the control room, where they stood watching the image of X that was still focused on the telescope screen.

"All those years," Laura whispered. "All that time."

"Do you realize what they're doing?" he asked softly. "They're not just surviving, turned inward on weaving and designing and music."

"In a few hours they're going to get up and start another day's work. They're going to pull anchor number one back to the front of their ship and lower it. That's their morning job. Then someone left in the rear will raise

anchor number two. Then the main group will start pulling against number one, as I saw them doing a little while ago, and their ship will begin to move toward Sol. Every day they go through this they move about thirty miles closer to home.

"Honey, these people are walking home and pulling their ship with them. It must be a religion with them by now, or something very near it..." He put an arm around Laura.

"MARTY... how long would it take them?"

"Space is big," he said in a flat voice, as if quoting something he had been required to memorize.

After a few moments he continued. "I said just moving a little faster won't help them. Let's say they've traveled thirty miles a day for two thousand years. That's — somewhere near twenty-two million miles. Almost enough to get from Mars to Earth at their nearest approach. But they've got a long way to go to reach the neighborhood of Mars' orbit. We're well out beyond Pluto here. Practically speaking, they're just about where they started from." He smiled wanly. "Really they're not far from home, for an interstellar

ship. They had their accident almost on the doorstep of their own solar system, and they've been walking toward the threshold ever since."

Laura went to the communicator and began to set it up for the call that would bring the Navy within a few hours. She paused. "How long would it take them now," she asked, "to get somewhere near Earth?"

"Hell would freeze over. But they can't know that any more, or maybe they still know it and it just doesn't bother them. They must just go on, tugging at that damned anchor day after day, year after year, with maybe a holiday now and then... I don't know how they do it. They work and sing and feel they're accomplishing something... and really, they are, you know. They have a goal and they are moving toward it. I wonder what they say of Earth, how they think about it."

Slowly Laura continued to set up the communicator.

Marty watched her. "Are you sure?" he pleaded suddenly. "What are we doing to them?"

But she had already sent the call.

For better or worse, the long voyage was almost over.

— FRED SABERHAGEN

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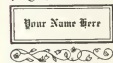
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